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LOGARITHMIC TABLES

OF

NUMBERS AND TRIGONOMETRICAL FUNCTIONS

BY

BARON VON VEGA.

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LOGARITHMIC TABLES

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BERS AND TRIGONOMETRICAL FUNCTIONS

BY

BARON VON VEGA.

TRANSLATED FROM THE

FORTIETH OR D^R. BREMIKER'S

THOROUGHLY REVISED AND ENLARGED EDITION,

BY

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IN THE UNIVERSITY OF ST. ANDREWS.

STEREOTYPED. — 69. EDITION.

BERLIN: WEIDMANNS.
1887.

PREFACE.

The existing logarithmic-trigonometrical Tables to seven figures may be divided into three classes. While the first class which contains the logarithms of the natural numbers is very nearly the same in all, they differ in the second, or trigonometrical part in this, that the first class contains the trigonometrical functions for the greatest part of the quadrant only for every full minute, the second for every tenth second, and the third for every single second. The oldest logarithmic table to seven figures belongs to the first class, viz. that of Sherwin, London, 1705. It contained the logarithms of the numbers from 1 to 101000 and besides the sines, tangents and secants, also their logarithms from minute to minute. This table had run through several editions by the end of the last century and served till quite recently as the basis of innumerable logarithmic tables, in some of which the natural sines and tangents, which are little wanted, were omitted, while others of them were enriched by more or less useful additions. Gardiner, who in the year 1741 prepared a third edition of Sherwin's table, constructed at the same time a table proceeding from 10 to 10 seconds, which was the first of its kind, and was published in London in the year 1742 in large 4^to^[1]. A second edition of this table also in large 4^to^ with the addition of the logarithms of the sines and tangents for every single second up to 4° was published at Avignon in 1770[2]. Upon these were founded Callet's "tables portatives" which were first published at Paris in 1783 and afterwards stereotyped. On account of their more convenient shape they soon displaced the former tables, and maintained the preference up to the most recent time. The first table of the third kind is the large one by Taylor published in London in 1792. Bagay's tables[1]) founded upon it and published at Paris in 1829, appeared in a much smaller form in consequence of the smallness of the figures. To the tables of the first and second class belong also the logarithmic tables to seven figures calculated for the centesimal division of the quadrant, as that by Hobert and Ideler[2]) proceeding from 100th to 100th of a grade (centesimal degree), and that published by Delambre[3]) in the year IX of the republic, in which the interval is ten times as small, viz. 10 centesimal seconds.

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[1] Tables of Logarithms.

[2] Tables de Logarithmes.

For tables to five figures the interval of one minute may be considered the proper one, because the differences will not be too large to admit of the proportional part for seconds being mentally calculated with readiness. In tables to seven figures this interval has always been recognized as highly inconvenient, on which account Gardiner directed his attention to the diminution of the interval. It is even necessary to diminish the interval to one second, if it be made a condition that the proportional part in this case too is to be mentally calculated. This very small interval, however, gives rise to several new inconveniences, which diminish the advantage of smaller differences to such a degree, that tables of this kind have never come much into use, at least with professional computers. Their large form, the excessive number of columns on every page, and the circumstance that even then there is not nearly room enough for all the figures, (the initial figures of the logarithms having to be placed at the top of the columns and the differences altogether omitted, so that they must be calculated by the computer,) make the advantage of the smaller interval very questionable.

The editions of Vega's *Logarithmic Tables* hitherto published had, in the trigonometrical part, the interval of 1 minute. In the present revised edition care has been taken not only to adopt the interval of 10 seconds for the whole quadrant in order to assign a higher rank to the tables, but also to secure all those ad-

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1) Nouvelles Tables astronomiques et hydrographiques. Paris, 1829.

2) Neue trigonometrische Tafeln. Berlin, 1799.

3) Tables trigonométriques décimales, calculées par Ch. Borda.

vantages which by attention to size and arrangement might in any way contribute to facilitate the looking out of logarithms. Although the tables have in consequence been considerably enlarged, the price has not been raised, so that the advantages of the enlarged edition are offered to purchasers at a cost, which is unexampled for a work of this kind.

Among the improvements in these tables we may mention:

1. The *systematic arrangement* of all the pages of each section, which has for its object that, when once the book is opened at the proper page, the eye with very little practice will involuntarily be directed to the place where the required logarithm is to be found. For nothing so much increases the difficulty of using tables as a want of uniformity in the position of the numbers. To attain this end main and sub-divisions have been introduced, which are easily distinguished and afford resting points to the eye. In the first part there are four such resting points on every page, viz. on the left page the lines corresponding to the numbers 10, 20, 30 and 40 are enclosed in double rules; on the right page, those corresponding to the numbers 60, 70, 80 and 90. The intermediate lines, opposite to the numbers 1 up to 9, are again separated by narrow spaces into groups of three each. In the second part each page contains 61 lines. Since five principal divisions are thus formed, the third, which is opposite to the number 30 either from the top or from the bottom, is marked by stronger lines, the subdivisions remaining the same as in the first part. Finally in the third part the lines corresponding to full minutes are inclosed between double rules, and every fifth minute is marked by thicker rules. This arrangement which was first employed in a table of six figures [1]), has at the same time the advantage, that both with ascending and descending arguments, as in the 2nd and 3rd part, the rules have always the same position relatively both to the right and left margin of the page, an advantage which was unattainable with the single horizontal lines hitherto in use.

2. The *type*. On several occasions Mathematicians and Astronomers have remarked, that the strongly shaded and equally high figures that have become the fashion during the last twenty years, though they present on the whole a better appearance on the page, are yet far less legible than the older ones. Moreover the new

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[1]) Logarithmorum VI decimalium nova tabula Berolinensis. Berlin, 1852.

type is easily injured in the finer strokes so that 1 and 4; 0, 6 and 9; 3, 5 and 8 become almost undistinguishable. Besides it often happens, that a figure thus strongly shaded, which dazzles the eye by its very blackness, does not leave sufficient blank space, the figures being both too close to each other and to the rules which mark the intervals. All these circumstances render the use of the tables more difficult and more fatiguing to the eye. Hence a type has been chosen which, being extremely slightly shaded, approaches the older form, projects partly above and below the parallel lines which inclose the main body and does not cover the white ground too much, while it is of a size which is neither too small to be easily recognized by moderately strong eyes, nor too large to get the requisite quantity into a moderate compass. The founding of this type is so characteristic that even after slight injuries which are inevitable after long use, there will be little fear of mistakes. Special attention has been paid to the proper distribution of the space which the figures and rules occupy; and the size of the page was not fixed upon till after repeated trials, and after all circumstances had been taken into account for facilitating the use of the tables.

3. In the trigonometrical part there is frequently a column next to that of the degrees, minutes and seconds, expressing the same arc in time; there are also in the first part one or two columns more which give the number, or the number increased tenfold, considered as a number of seconds expressed in degrees, minutes and seconds. This and similar other arrangements have here been omitted, as double and treble arguments, which are not out of place in nautical tables, but tend to obstruct the simple use of a table to seven figures without affording any equivalent advantage. On the other hand, in the first part at the foot of the page the twofold reduction of the argument into arc has been indicated, together with the logarithms of $\frac{\sin x}{x}$ and $\frac{\tan x}{x}$ from 10 to 10 seconds, from 0 to 2° 46′ 40″. The latter are required for passing from log arc to log sin and log tan, and are of particular value in geodetic calculations, where long operations have sometimes to be performed with small arcs which are usually expressed in seconds, while four or five decimal places of the second have to be retained.

To facilitate the interpolation, small tables of proportional parts have been added in the first and third parts. The use of smaller type has enabled us to give them completely even in the first pages for every difference. These tables give accurately the tenths of the whole difference, so that the addition of the thents, hundredths and thousandths gives the proportional part correct to the last figure, which is not the case with the usual arrangement. According to a very common arrangement the same small table of proportional parts has to be used for the whole extent of the table in its vicinity, without reference to the difference whether it be an unit more or less; but this has been rejected as inaccurate. In the third part want of space has prevented all the differences from being given; at the commencement, i. e. beginning at 5°, those only could be inserted which differed by 10 units, then those differing by 5, by 3 etc., while finally, from 24°, each difference is set down. The advantages which these tables afford in interpolation, will be best appreciated by those, who have felt their want in all other tables.

Special attention has been paid to the correctness of the seventh decimal place. Since the accurate value of a logarithm, unless it be a whole number, is always an interminable decimal fraction, the part which follows the first seven figures necessarily amounts to more or less than five units of the 8th decimal place. In the former case the number in the seventh place must be increased by one unit, in the latter not, in order that the tabular value may always differ by less than half an unit of the last place from the true value of the logarithm. Therefore in order to set down the seventh place correctly, a knowledge of the following figures is required. A comparison with Vega's Thesaurus logarithmorum [1]) left only those logarithms of numbers doubtful, whose logarithms to ten figures ended with 500; these were therefore recalculated to fifteen places. The tenth figures proving accurate throughout, even in many other cases where the computation was repeated, it was found unnecessary to recalculate the logarithms ending in 499 and 501. The case was however far different in the trigonometrical section. Here the Thesaurus logarithmorum [1]), with the exception of a few cases as indicated by Vega himself and referring to that part of the table in which the interval is 10 seconds, can hardly be considered as anything but a reprint from

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[1]) Thesaurus logarithmorum completus. Lipsiae, 1794.

Vlack[1]), since many comparisons of erroneous places have shown no difference between them. Now the uncertainty of the last figure amounts to 4 units, hence it became necessary to recalculate all the logarithms which in the Thesaurus end in 496, 497, 498, 499, 500, 501, 502, 503 and 504, since a correction amounting to more than 4 units might alter the last figure in logarithms to seven places[2]). These calculations have been made by means of Briggs's table to 14 places[3]), the results of which were checked by the formation of differences, and it has been found, that in modern tables, including the former editions of these tables, many logarithms have been set down wrong in consequence of too much confidence being placed in the Thes. log. For the comparison of the sines and tangents for every second the Thes. log. gave the logarithms to ten figures only up to 2 degrees, hence other means had to be adopted for the interval from 2 to 5 degrees. Interpolation from the Trig. Britt. which first suggested itself to us was found upon repeated trials to be too laborious, as it required six series of differences to be taken into account. Interpolation between the logarithms to ten figures, given for every ten seconds, did appear less open to objection, since the uncertainty of the last figure would be increased in the interpolated numbers. Hence direct computation was preferred, the more so, as with proper arrangement it led most rapidly and safely to the desired result. First of all for every 400 seconds in the interval from 0 to 5 degrees the logarithms of $\frac{\sin x}{x}$ and $\frac{\tan x}{x}$ were calculated; the series giving these functions arranged according to powers of x converge very rapidly, so that the first four terms suffice to give the logarithm accurate to 14 places, and for the interpolation four series of differences suffice. These logarithms having been tested by differences and reduced to the interval of 100 seconds by interpolation, the first ten places were further interpolated to an interval of one second; the logarithms of the numbers being added, all the sines and tangents to ten figures were obtained. Amongst these logarithms, those terminating in 499, 500 and 501 were recomputed to three more figures on account of an uncertainty of an unit and a half arising from the interpolation. This calculation was effected by means of the logarithms, previously computed to 14 places by interpolation, in which process the logarithms of natural numbers given to 14 figures in Briggs's table[1]), were used, and thus the data were obtained for assigning to every logarithm which the table was to contain its strict value, independently of other determinations. The seventh decimal place being fixed, the preceding six were tested by differences, and evidence of their correctness was thus established.

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[1]) Trigonometria artificialis. Goudae 1633.

[2]) Other errors, too, occur which cannot be considered as errors of the press. Thus the last three figures 517 of log tan 0° 2′ 7″ are given too great by 90 and the Sine and Cotangent present the same error.

[3]) Trigonometria britannica, edited by Gellibrand. Goudae 1633.

In order to guard as much as possible against errors of the press three proofs were read previously to stereotyping, and one subsequently. The first two were corrected by comparison with the manuscript, while the third was tested by differences in order to be secure against MS. errors. Finally the last figure has been compared with the tables of Gardiner[2]) and Callet[3]) and in part with those of Taylor[4]). Gardiner, who has likewise founded his logarithms to seven figures upon an abridgment of those to ten according to Vlack, has used great caution to insure the correctness of the 7th figure. He states in the preface to his tables, that he previously tested the last figure in Vlack by means of differences and corrected many errors, which he must have done with great care, for we found on comparison only two cases in which the last figure is not quite correct, viz. log 52943 and log cos 24° 55′ 30″, for which he gives 7238086 and 9.9575404, both of which are too large by an unit of the last place: the accurate values of these logarithms being 7238085 4683559 and 9.9575403 4999866. This care which also extends to that part of the table, which contains the logarithms for every second from 0 to 72 minutes, appears not to have met with due appreciation from later editors of logarithmic tables. Indeed it seems finally to have fallen completely into oblivion, as appears partly from the additions made in the later editions of Gardiner and partly from the circumstance, that after the publication of the Thesaurus logarithmorum in which, as has already been stated, only some few of Vlack's logarithms have been corrected, (most of them being reprinted unaltered), the editors of tables have taken its correctness for granted, either to avoid the trouble of a strict examination, or confiding in the accuracy implied by the offer of a ducat for the detection of every error, no similar reward having ever been previously offered. This affords the only explanation of the fact, that in more recent tables several logarithms have been brought back to the erroneous values which follow from Vlack's table, though they are correctly given by Gardiner. Thus 1) the log sin 2° 29′ 50″, whose accurate value is 8.6391970 5001389 has with Gardiner 1 in the seventh place which is correct; but since Vlack and Vega give the log to ten figures 6391970 499, we find in the recent tables and also in Taylor 0 in the seventh place. 2) log tan 5° 7′ 40″ is 8.9529682 4994086; Vlack and Vega give 9529682 501; Gardiner gives 2 in the seventh decimal place; the more recent tables, including Taylor's give 3. 3) log tan 7° 23′ 50″ is 9.1133684 5003401; and therefore 5 is the correct figure in the seventh place; but Vlack and Vega have 1133684 499, whence the recent tables including Taylor's give 4. 4) log tan 7° 59′ 0″ is 9.1468849 4989462, therefore 9 is the correct seventh figure; but Vega and Vlack have 1468849 501, and the modern tables have consequently 50 as the last two figures. 5) log sin 20° 9′ 0″ is 9.5371628 5003911, but in Vlack and Vega 5371628 499; Gardiner gives 9, the modern tables 8 in the 7th place.

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[1]) H. Briggii arithmetica logarithmica. London, 1624.

[2]) Table of logarithms. London, 1826.

[3]) Tables portatives de logarithmes. Paris, 1795. Tirage 1821.

[4]) Tables of logarithms. London, 1792.

The second edition of Gardiner published in the year 1770 at Avignon contains besides all the logarithms of the first edition, which were adopted without alteration¹), the logarithms of the sines for every second from 72′ to 4°, and log tan for every second from 0 to 4°. The logarithms thus added have not the same degree of accuracy as those transferred from the older table, though their correctness is still such as might well have served as a pattern for later tables. For a comparison shewed that out of 22032 logarithms only 22 were wrong by an unit. Both these editions are in large 4°, which renders them cumbrous. For this reason and in consequence of Gardiners's tables becoming scarce, Callet edited a new logarithmic-trigonometrical table, which was printed by Firmin Didot, and was the first, in which the printing

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1) A few false prints, discovered during the 28 years that the tables had been were corrected, but many new errors were introduced.

from plates was successfully carried out. Besides a long introduction on the calculation and application of logarithms, tables of the natural sines and cosines, tangents and cotangents, and natural and common logarithms of numbers to 20 and 60 figures, this edition contained all the logarithms of the Avignon edition, with this addition that the log sin and log tan for every second which the latter contained up to 4° were carried one degree farther. But in this enlargement, the degree of accuracy introduced by Gardiner is utterly neglected. A comparison with this part of the tables which contains 6480 logarithms not occurring in Gardiner gave 1368 logarithms inaccurate by an unit in the last place. Finally the last figure of each of the 36000 logarithms of the second part was compared with Taylor's table, which is generally considered as a pattern of accuracy in the last figure, and every deviation thus found was subjected to a separate investigation. This examination gave 35 cases, in which the last figure in Taylor is wrong by an unit; of these 19 coincide with the erroneous statement in the Avignon edition.

A comparison of the logarithms of the first part with Babbage's most carefully edited table, in which elementary principles regarding the construction of tables were first established, furnished one case, that of log 52943 which, as in Gardiner, was given too great by an unit. The same error occurs also in the tables of Callet, Taylor, Delambre and others, evidently because all have copied Gardiner without farther examination.

The first two proofs of this table were corrected by MM. Lautensach, and Goldammer, and a third revision was instituted by myself, and checked by differences. After they were stereotyped the proofs from the plates were revised partly by Mr. Volkmann, and partly by Mr. Koch.

Berlin, August 1856.

BREMIKER.

INTRODUCTION.

The common Logarithms (Briggs's) are the only ones used to facilitate extensive numerical calculations. In this system, the logarithm of a number is the index of that power of 10 which is equal to the number. If for example a and b are the logarithms of the numbers A and B, we have

$$10^a = A \text{ and } 10^b = B$$

or

$$\log A = a \text{ and } \log B = b$$

and by the theory of powers and logarithms it follows, that

$$10^{a+b} = AB, \qquad 10^{a-b} = \frac{A}{B}, \qquad 10^{ac} = A^c, \qquad 10^{\frac{a}{c}} = \sqrt[c]{A},$$

or

$$\log AB = a + b, \ \log \frac{A}{B} = a - b, \ \log A^c = ca, \ \log \sqrt[c]{A} = \frac{a}{c},$$

from which we see that the logarithm of a product is the sum of the logarithms of the factors, the logarithm of a quotient the difference between the logarithms of the dividend and divisor, and that the logarithm of a power or root is found by multiplying or dividing the logarithm of the radix by the exponent.

The application of these four formulæ, to which all calculations with logarithms are limited, rests upon the condition that, given a number we can find with facility its logarithm, and conversely, given a logarithm we can readily find the corresponding number. It is the object of logarithmic tables to solve these two problems.

From the above definition of logarithms which is perfectly sufficient for practical purposes, it follows further that

$$\log 1 = 0, \ \log 10 = 1, \ \log 100 = 2, \ \log 1000 = 3, \text{ etc.}$$
$$\log 0.1 = -1, \ \log 0.01 = -2, \ \log 0.001 = -3, \text{ etc.}$$

and these are the only numbers, whose logarithms are integers. The logarithm of any other number consists of an integer (termed the index or characteristic) followed by a decimal fraction (mantissa), which has the property of being incapable of being fully written out, since it goes on *ad infinitum*. Fortunately it is only in rare cases, that more than seven decimal places of this fraction are required: in general indeed four or five suffice, and it is only for the most accurate computations that six or seven are used.

TABLE I.

To find the logarithm of a given number, or the number corresponding to a given logarithm, a table is used which contains the logarithms of all whole numbers from 10000 to 100000. Such a table is that extending from p. 6 to p. 185. It is, indeed, preceded by a few pages containing the logarithms of 1 to 1000; but this is done more for the sake of convenience than because it is necessary, since all the same logarithms also occur in the rest of the table.

Given a number, to find its logarithm.

If the given number consists of five figures, the first four are to be sought in the first column headed N (number), and the last in the horizontal line at the top. Then the last four figures of the logarithm will be found where the horizontal line, corresponding to the first four figures of the number meets the vertical line corresponding to the fifth figure. The first three figures of the logarithm stand in the column headed 0, and are common to all the figures in the same horizontal line. Where these are not given on the horizontal line, the immediately preceding three figures have to be taken, except when the first of the last four figures is marked with a line above it, in which case the first three figures of the logarithm are those which occupy that position in the next horizontal line.

Example 1. Required the logarithm of 24818.

At p. 35 looking down the first vertical column we stop at 2481, and then follow the horizontal line to the right as far as the column headed 8. Here we find the number 7668. These figures are annexed to the number 394, which remain the same for several lines, and are placed three lines higher up in the column headed 0; so that we get 394 7668. The index which is not set down in the table is 4 throughout, hence log 24818 = 4.3947668.

Example 2. Required the logarithm of 24833.

Here the last four figures are 0292, the first of which is marked with a line ($\overline{0}$), hence they are to be combined with 395; therefore the logarithm of 24833 is 4.3950292.

When the given number besides an integer part of five figures contains a decimal fraction, the difference of the logarithms of the two whole numbers of five figures between which the given number lies has to be multiplied with the decimal fraction, and the product to be added to the logarithm of the whole number. Thus let the number be 24833.73; this being contained between 24833 and 24834 whose logarithms differ by 0467 — 0292 = 175, we multiply 175 by 0.73 which gives 128. Adding this to log 24833, which was 4.3950292, we get 4.3950420 for the log of 24833.73. To facilitate this multiplication every page contains small additional tables in a column headed P. P. (proportional parts) which for each of the differences occurring on that page give the several tenths, whence the hundredths, thousandths, etc. are easily deduced. In the last example we make use of the table headed 175, from which we get

$$\begin{array}{lr} \text{for } 0.7 \ldots\ldots & 122.5 \\ \text{for } 0.03 \ldots\ldots & 5.25 \\ \hline \text{together} & 127.75 \end{array}$$

of which the decimal fraction is rejected, but the last figure is increased by an unit, since the omitted fraction amounts to more than 0.5.

By means of the logarithms of the numbers, having an integer part of five figures, it is easy to find those of all other numbers written with the same significant figures; for their logarithms will only differ in the index. Thus if the logarithm of 24.83373 is required, we first find the log of 24833.73 and subtract from it log 1000. Since the latter = 3, we get log 24.83373 = 1.3950420. In the same way log 248337300 = log 24833.73 + log 10000 = log 24833.73 + 4 = 8.3950420. If the given number is a proper fraction, as for instance 0.06103, we find at p. 108 log 61030 = 4.7855434, and since $0.06103 = \frac{61030}{1000000}$ therefore log 0.06103 = log 61030 — 6 = 4.7855434 — 6, which would be negative, viz. — 1.2144566; but it is more convenient for calculation to write 8.7855434 — 10, so that the fraction in the logarithm may be positive. The general rule then, is: form a number of five figures in the integer part from the given number either by annexing cyphers or by separating the first five figures; find the fractional part of the logarithm of this number, and give an index less by one unit than the number of figures in the integer part of the given number. The index of a proper fraction is found by subtracting the number of cyphers between the decimal point and the first significant figure from 9.

Given a logarithm, required the corresponding number.

A logarithm being given, and it being required to find the corresponding number, we first look out the first three figures of the decimal fraction in the logarithm in the column headed 0, and then in the columns headed 0, 1, 2 . . . those four figures, which are next less than the remaining four figures of the given logarithm. We now take out from the vertical column headed N the number consisting of the four figures, which are on the same horizontal line that contains the last four figures, and as fifth figure, the one at the head of the column. For example, if the logarithm 2.5833980 be given, we find at p. 62 the logarithm 583 3915, to which corresponds the number 38317. The difference between it and the next greater logarithm is 113, whilst the difference between it and the given logarithm is 65. Now the figures following the first five places are found by dividing 65 by 113, that is to say, the next figure is obtained by taking this fraction 10 times, the two next by taking it 100 times, the three next by taking it 1000 times. It would be inexpedient to take more, because even the third figure is incertain. But this division may be facilitated by the table of proportional parts headed 113. We take from it the next figure 5 corresponding to 56.5 which is next inferior to 65; substracting 56.5 from 65, there remains 8.5. Taking this tenfold, which gives 85, we find opposite to the next inferior number 79.1 the number 7 as the next figure in the number, and again increasing the difference 85 — 79.1 = 5.9 tenfold, which gives 59, and looking for the next inferior number in the table (which is 56.5) we find the figure 5, hence the figures following the first five are 575, and the number is written with the figures 38317575; and since the given logarithm has the index 2, the decimal point must be put after the third figure; therefore the required number is 383.17575. The index, however, might have any other value, the number would still consist of the same figures, only the position of the decimal point would change; thus if the logarithm were 9.5833980, the corresponding number would contain an integer part of 10 figures. But since the tables furnish only the first eight figures of the number, as found above, two cyphers must be annexed, giving the number 3831757500. If the logarithm were 7.5833980 — 10, the corresponding number would be 0.0038317575. Hence the computation of the proportional part which with a little practice and by making use of the small table of proportional parts may be made mentally, (so that no other figures need be written down than those actually sought), would stand thus:

$$\begin{array}{lrr}
\text{Given logarithm}\;.\;.\;.\;. & & 2.5833980\\
\text{pag. 62. number } 383.17\;.\;. & & \underline{2.5833915}\\
 & \text{Difference} & 65\\
\text{by the table for the difference } 113 & 5\;.\;.\;.\;. & \underline{56.5}\\
 & & 85\\
\text{again}\;.\;.\;.\;. & 7\;.\;.\;.\;. & \underline{79.1}\\
.\;.\;.\;.\;.\;.\;. & \underline{5}\;.\;.\;. & 59\\
\text{required number} = & 383.17575 &
\end{array}$$

In logarithmic calculations cases occur, in which the logarithm of a logarithm has to be taken. If for example a number is to be raised to a power, whose exponent is a number of many figures, or a similar root has to be extracted, we should have to multiply or divide the logarithm of the given number by another large number; but this is again best done by the aid of logarithms. As a first example let it be required to raise the number 23.90087 to the power 1.1087023; here we take the log of 23.90087 which is = 1.3784137; and this must be multiplied by 1.1087023; hence we add the logarithms of both the numbers

$$\begin{array}{l}
\log 1.3784137 = 0.1393796\\
\log 1.1087023 = \underline{0.0448149}\\
\log 1.5282504 = 0.1841945
\end{array}$$

and look out the number 1.5282504 corresponding to their sum. This is the logarithm of the required power; hence this power is the number, corresponding to this logarithm, viz. 33.748186. Again, to take a second example, required the 7.001705th root of 0.791; here we should have to divide the log of 0.791 which is 9.8981765 — 10 by the index of the root. Now in this case the dividend is a difference, and it is simpler to restore the negative logarithm and to divide it than to divide the two terms of the difference separately, and to get the quotient by the subtraction of the results. Now the negative logarithm is $= -0.1018235$; hence

$$\begin{aligned} \log 0.1018235 &= 9.0078480 - 10 \\ \log 7.001705 &= 0.8452038 \\ \log 0.0145427 &= 8.1626442 - 10 \end{aligned}$$

Corresponding to the difference $8.1626442 - 10$ we find the number 0.0145427, which is the logarithm of the root; but it is negative, since it has arisen out of the division of a negative logarithm by a positive number; hence the tabular-logarithm is $10 - 0.0145427 - 10 = 9.9854573 - 10$ and the corresponding number is -0.9670687 which is the required root.

TABLE II.

Table II, (p. 188 to p. 287) serves to find log sin and log tan of an arc not greater than 5°, or the log cos and log cot of an arc lying between 85° and 90°. The left hand page of the table contains the logarithms of the sines of arcs between 0 and 5 degrees. Degrees and minutes are given at the top, the seconds on the left hand margin. These logarithms are at the same time the log cos of the complementary angles, the degrees and minutes of which are indicated at the bottom of the page, the seconds on the right hand margin. Thus according to p. 210 $\log\sin 1^\circ\ 11'\ 46'' = 8.3196173$, which is also $\log\cos 88^\circ\ 48'\ 14''$. The right hand page is constructed exactly similarly with regard to log tan of arcs between 0 and 5° and log cot of arcs between 85° and 90°.

Given an arc, required its log sin or log tan.

For every full second the log sin and log tan are given in the table. If the arc contains additionally a fractional part of a second, the proportional part has to be calculated in the same manner as for the logarithms of numbers. For this purpose, the logarithm corresponding to the integer part of the seconds in the given arc is substracted from the log corresponding to the next full second, or *vice versa*, the difference is multiplied by the fractional part of the second in the given arc, and the product added to, or subtracted from the former logarithm, according as the logarithms go on increasing or decreasing; the former being here the case for descending arguments and the latter for ascending arguments. Thus let it be required to find log sin 2° 19′ 49″.71. At page 234 we find log sin 2° 19′ 49″ = 8.6091653, differing from the next greater log of sin 2° 19′ 50″ by 518, which multiplied by 0.71 gives 367.78 instead of which we take 368. Adding this proportional part to the preceding logarithm we get 8.6092021 as the required log sin 2° 19′ 49″.71.

As a second instance let us find log cot 86° 53′ 11″.374. According to p. 251 this log lies between 8.7355695 and 8.7355307 the difference of which is 388; multiplying this by 0.374 we get 145 which has to be subtracted from the former of these logarithms since they decrease for ascending arguments; hence the required log is 8.7355550.

Given the log sin or log tan of an arc, required the arc.

The process of finding the arc corresponding to a given log sin or log tan by means of table II is exactly the same which is adopted in finding the number corresponding to a given logarithm in table I. We look out the logarithm either next above or next below the given one, according as the logarithms increase or decrease with the increase of the arc; form the difference between it and the given logarithm, and divide it by the whole difference between the two consecutive logarithms of the table between which the given log lies. The quotient is the fractional part of a second which has to be added to the whole number of seconds contained in the arc corresponding to the logarithm, from which we had started; for example let 8.5139150 be the given log cos. The next greater log of the table is according to page 224, 8.5139642, differing from the given one by 492, but from the next smaller one in the tables by 645; hence the arc is that corresponding to the preceding logarithm, which is 88° 7′ 43″ increased by $\frac{492}{645}$ or 0″.763, i. e. 88° 7′ 43″.763.

When a calculation refers to arcs under 30 minutes, and it is required that the seventh decimal place of the logarithms shall be perfectly accurate, a condition which occurs in higher geodesy, we have to take into account five decimal places in the seconds in passing from the arc to log sin and log tan, or *vice versa.* In this case the use of table II becomes inconvenient both in consequence of the long multiplications and divisions in calculating the proportional parts, and because it would be necessary ke into account second differences. Here the application ole I is preferable. To find from it the log sin or log tan arc, convert it into seconds, take the log of the number onds, and add to it the corresponding value of S or T, gi- t the bottom of the page, each of which begins with 4.685. if it be required to find log sin and log tan of 22′ 57″.7083, ive (see p. 13)

$$\begin{aligned} \log 1377.7083 &= 3.1391573 \\ S\ 22'\ 58'' &= 4.6855716 \\ T\ 22'\ 58'' &= 4.6855813 \\ \log\sin &= 7.8247289 \\ \log\tan &= 7.8247386 \end{aligned}$$

in interpolating we have only to take account of whole ls. If the arc were 137″.77083, we should as before take c from p. 13, but the numbers S and T with the argument ″; from p. 2; thus we should have

$$\begin{aligned} \log 137''.77083 &= 2.1391573 \\ S\ 2'\ 18'' &= 4.6855748 \\ T\ 2'\ 18'' &= 4.6855749 \\ \log\sin &= 6.8247321 \\ \log\tan &= 6{\cdot}8247322 \end{aligned}$$

f conversely, it be required to find the arc corresponding given log sin or log tan, we first take the arc to the nearest l below from table II, and look out in table I the corre- ing values of S and T; we subtract these from the given thm and take out the number corresponding to the difference, gives the required arc in seconds. Thus let 7.1690522 be en log tan. According to p. 189 the corresponding arc lies en 5′ 4″ and 5′ 5″; at p. 3 the value of T is 4.6855752, hence

$$\begin{aligned} &\log\tan \;\ldots\ldots\; 7.1690522 \\ &T\ 5'4'' \;\ldots\ldots\; 4.6855752 \\ &\text{Difference}\quad 2.4834770 = \log 304.4227 \end{aligned}$$

arc = 304″.4227 or 5′ 4″.4227.

n this method it would be necessary to refer to two or even different places of the tables; to avoid this inconvenience e has been added at p. 575 which for arcs up to 35′ gives much more readiness all transitions between S, arc and log well as those between T, arc and log tan. For extensive tic calculations this table may be taken out of the book and ted on cardboard, to be used as an auxiliary table, besides which we require only the table of logarithms of the numbers of the seconds in the arc. In regard to the construction of this table, it is to be observed, that the value of $S = 4.6855749$ holds up to 1′ 39″ and log sin 6.681. From 1′ 40″ or log sin = 6.682 . . . the succeding value of $S = 4.6855748$ is to be used. All other values of S answer accurately to the arcs and log sin on the same line with them, so that in passing from the arc or log sin to the number S that value of S has to be taken, which lies nearest to the given arc or log sin. The same rule holds for T. Hence, except for a few values of S and T towards the end of the table which increase by 10 units at a time, all interpolation is avoided, as with a glance at the table we can at once take out the required S or T.

TABLE III.

This table contains for every ten seconds of the quadrant the logarithms of the sines, cosines, tangents, and contangents. From 0 to 45° the degrees are placed at the top of the page; the minutes and seconds, denoted with ′ and ″ on the left hand margin, which is to be combined with the heading at the top of the page. From 45° to 90° the degrees are put at the bottom of the page, the minutes and seconds at the right hand margin, and the name of the trigonometrical function at the foot of the column. Arguments that are opposite one another are complementary (i. e. make together 90°) and the sines and tangents (i. e. their logarithms) of an arc above 45° are also placed opposite to the sines and tangents of its complement, because the former are respectively the cosines and cotangents of the latter, and *vice versa.* For the sake of symmetry the sine is placed next to the argument, next to it the tangent, which is followed by the cotangent, and this by the cosine; and since for complementary angles the same logarithms hold, but in an inverse order, there is again next to the argument the sine, followed in order by the tangent, cotangent, and cosine, as may be seen by the names at the top and bottom of the columns. The differences of any two consecutive logarithms are placed for the sine and cosine immediately to the right on the intermediate line, and are headed d (differentia); for the tangents and cotangents they are also placed between these columns on the intermediate line and are headed d. c. (differentia communis) since these differences hold for both. The sines osines of all arcs in the quadrant are proper fractions, and the tangents for arcs below 45°; hence their logarithms be negative. But the index and the fraction have been positive by the addition of 10, so that — 10 has to be sup- For tangents of arcs between 45° and 90° this supplement be omitted.

Given an acute angle, required its sine (log sin).

s the table contains the sine only for every tenth second, ve to interpolate for the units and its decimal parts. This e, as in the case of the logarithms of numbers, by multi- the decimal fraction formed by the tenth part of the units he appended fraction by the difference, and adding the pro- o the log sin of the next inferior multiple of 10″; for ex- let it be required to find log sin 18° 51′ 27″.21. Here the f 18° 15′ 20″ is 9.5094491, which differs from the next in the by 616; multiplying this by 0.721 we get 444, which added preceding logarithm gives 9.5094935, the number required. ormation of this product, when no separate auxiliary table portional parts[1]) is employed, is facilitated by the small of differences on the margin. Since for want of space it ot been possible to put down all these differences we in case take the nearest; in the present instance we take that 4. It gives

for 0.7 . . . . 429.8
for 0.02 . . . . 12.3
for 0.001 . . . 0.6
together 442.7

ut since the difference 616, is greater by 2 than 614, we to add $0.721 \times 2 = 1.4$, which gives 444 as the proportio- rt. Similarly we might have made use of the table headed n the left hand page, which would have given 444.9 and this we would have had to subtract 0.721×1 i. e. 0.7, so he result would have been the same.

Given an acute angle, to find its tangent (log tan).

he logarithms of the tangents like those of the sines go on increasing as the arc increases from 0 to 90°, so that the proportional part has again to be added. Its computation is exactly like that for the sine: the tenth part of the number formed of the units and the decimal part of the seconds is multiplied by the whole difference and the product added to the log tan of the next inferior arc in the table, and here again, if better means are wanting, recourse may be had to the small difference tables in the margin. Thus let it be required to find log tan 56° 22′ 3″.89. At page 491 we find log tan 56° 22′ 0″ = 0.1770234, differing from the next greater tangent by 457 (a difference found above the logarithm since the argument is ascending). The small table for 457 gives

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[1] Bremiker, Tafel der Proportionaltheile (Table of proportional parts). Ferd. Dümmler, 1843.

for 0.3 . . .	137.1
0.08 . . .	36.6
0.009	4.1
for 0.389 . . .	177.8 or 178

Adding 178 to the preceding log, we find 0.1770412 the required log tan.

We may here observe, that a computer who has had some little practice, shortens the calculation of the proportional parts very materially; and in the last example he would not write down any figures excepting those in the required logarithm. He would proceed in the following manner. Having opened the book at the proper page, in this case p. 491, he points with a finger of the left hand to log tan 56° 22′ 0″. A glance shews, that 457 is the proper difference. (A practised computer in order to avoid the risk of a mis-print will verify at the same time, that this is really the difference of the two logarithms standing one above the other.) Keeping the finger of the left hand pointing, he takes from the small table headed 457 with the argument 0.389 first 4.1 for the last figure 9; this he adds mentally to 36.6, which corresponds to the second figure 8; this again gives 40.7, which is added to 137.1, which number is opposite to 3. The sum 177.8 for which 178 is taken, is added to the last four figures 0234 of the logarithm, to which the finger points; this gives 0412 as the last four figures of the required log. These are finally read together with the first figures 0.177, and written down in their proper place on the paper on which the calculation is made. The mental calculation is much facilitated by acquiring the habit of forming the sums of two numbers not as usual from right to left, but from left to right, which has the advantage of giving the last four figures of the logarithm in this order, and enables the calculator to write down from left to right the whole logarithm, consisting of eight figures. Reading sums and differences of two logarithms placed one above the other from left to right has in general many advantages in calculations, both because it is more convenient to write from left to right, and because we may use the number thus read as the argument for looking out the corresponding arc, without writing down the number itself, which is frequently no further needed.

Given an acute angle to find its cotangent.

The logarithms of the cotangents and tangents of the same arc always have the same sum 10, or properly 0, since we have mentally to supply either to the tan or cot the number — 10. Hence the cotangents continually decrease as the arc increases from 0 to 90°, and the proportional part which has to be calculated with the same difference as the tangent must be subtracted. Thus let it be required to find log cot 14° 55′ 18″.02. At page 379 we find first the logarithm 0.5743959 as log cot 14° 55′ 10″ with the difference 846. The small table for the difference 845 gives for 8.02 the proportional part 677.7, which on account of the difference being greater by 1 has to be increased by 0.8, giving 678.5; this subtracted from the above number leaves 0.5743281 the required log cot.

Given an acute angle, to find its cosine.

The log cos is found in the same manner as the log cot, because it, too, decreases continually with the increase of the acute angle. If the angle is 45° 41′ 44″.25, we subtract from log cos 45° 41′ 40″ which is 9.8441569 with the difference 216 (see p. 555) the product of 0.425 × 216, i. e. 92, which gives the required log cos = 9.8441477.

Given a log sin, cos, tan or cot, required the corresponding acute angle.

When the acute angle corresponding to a given logarithm of a trigonometrical function has to be found from the table, two cases must be distinguished, according as the logarithms and arcs do or do not increase simultaneously. In the former which is that of the sines and tangents we look out the next smaller logarithm, subtract it from the given one and divide this difference by the whole difference between it and the next greater logarithm in the table. The quotient being put in the form of a decimal fraction, the decimal point is moved one place to the right, and the result will be the number of units and parts of an unit of a second, which have to be taken together with the arc corresponding to the log from which we started. The division may be executed by the aid of the tables of differences. Example: log sin being 9.8725738 we find at p. 540 the next smaller log sin 9.8725654, corresponding to the arc 48° 13′ 10″, and differing from the given log by 84, whilst the whole difference is 188; now a glance at the small table headed 188 shews that 84 contains 0.4, and opposite 4 the table gives 75.2, the number next below 84, and differing from it by 8.8. These, according to the same table, give 0.04 with a remainder 1.3, because 7.5 corresponds to .04; this remainder 1.3 gives .007 more; hence the whole decimal fraction is 0.447. Moving the decimal point one place to the right, we get 4.47 as the number of seconds which, added to 48° 13′ 10″, give 48° 13′ 14″.47 for the required arc.

Should the margin not contain a difference table for the whole difference we may make use of the one calculated for the next greater or smaller number, provided only we increase or diminish the numerator of the required fraction in the same proportion. Leth the given fraction be $\frac{P}{Q}$, and let the table for $Q \pm q$ be used; it suffices to take instead of P the number $P \pm \frac{P}{Q} q$ and use this as argument. Thus if there be given log tan = 9.2632000, the next smaller log tan (see p. 352) is 9.2631240, and the difference 760 has to be divided by 1188. If now the table for 1180 be used, we must take $760 - \frac{760}{1188} \times 8 = 760 - 5 = 755$ instead of 760; and corresponding to this we find by the table 0.640. Similarly we might make use of the table for 1190, in which case we must increase 760 by $2 \times \frac{760}{1188}$ or by 1; and corresponding to 761 the table for 1190 gives the same result, viz. 0.640. Hence the arc corresponding to the given log tan is 10° 23′ 16″.40.

When the logarithms decrease with the increase of the arc, which is the case with the cot and cos, the next greater logarithm is looked out, from it the given one is subtracted and this difference divided by the whole difference; the rest of the process remains as before. For example let log cos = 9.7107395; at p. 475 we find log cos 59° 5′ 10″ = 9.7107512 which is next greater than the given one, differing from the given log by 117, whilst the whole difference is 352, and by the small table for 352 we get $\frac{117}{352}$ = 0.332; hence the arc is 59° 5′ 13″.32.

When the sines are to be determined for an angle exceeding 90°, we subtract from it one, two, or three right angles as the case may be, and take the sine of the remaining acute angle when two right angles have been subtracted, but take the cosine when one or three right angles have been subtracted. It is to be observed, besides, that the sines are negative in the third and fourth quadrants, which is denoted by an n annexed (as an index) to the logarithm. In like manner log cos of an angle exceeding 90° is found by first taking from it one, two, or three right angles, and then determining respectively the sine, the cosine or the sine of the remainder, and observing that the cos is negative in the second and third quadrants, which again is indicated by annexing an n to the logarithm. For tangents and cotangents which are negative in the second and fourth quadrants the same interchange has to be made, when 1 and when 3 right angles have been subtracted. These relations are shown in the following tabular form, in which z represents an angle in the first quadrant, so that 90° + z, 180° + z and 270° + z lie in the second, third, and fourth quadrants respectively.

arc	sine	cosine	tangent	cotangent
z	+ sin z	+ cos z	+ tan z	+ cot z
90° + z	+ cos z	— sin z	— cot z	— tan z
180° + z	— sin z	— cos z	+ tan z	+ cot z
270° + z	— cos z	+ sin z	— cot z	— tan z

From this table it appears conversely, that corresponding to a given value of every trigonometrical function, when its algebraic sign is unknown, four different arcs in the first four quadrants may be found; and two when the sign is given. If for example a log cos with n annexed is given, so that the cosine is negative, this taken positively may be looked out in the column of the cosines, when 180° have to be added to the corresponding acute angle; or it may be found as the sine of an acute angle which increased by 90° has the given cosine. For an arc to be completely determined by a trigonometrical function we require, besides the sign of this function, also that of any other trigonometrical function of the same arc, provided the two are not tan and cot, or we must know from other sources in what quadrant the arc lies. Trigonometrical calculations are usually so arranged, that for the determination of an arc the logarithms of two numbers, respectively proportional to the sine and cosine, with their proper signs are finally obtained, so that no doubt remains as to the quadrant. For if the logarithms of a sin A and a cos A are given, their difference is log tan A, and A lies in the first or third quadrant, according as sin A and cos A are either both positive or both negative, the tangent being positive; or A lies in the second quadrant, when sin A is positive, and cos A negative; finally A lies in the fourth quadrant when sin A is negative and cos A positive, in both which cases tan A is negative. Hence in the first case (when tan A is positive), the logarithm is looked out amongst the tangents, and the corresponding acute angle is taken out, or that angle increased by 180°; in the second case, when the tangent is negative, we look out the log in the column of cotangents, take out the corresponding acute angle and increase it by 90° or 270° respectively. The angle A being found, the subtraction of log sin A from the first or of log cos A from the second number gives log a. The following examples will serve to illustrate these rules.

log a sin A	3.0857112	9.5028101	1.8839108 n	8.1158505 n
log a cos A	2.7130088	9.6729909 n	2.0057687 n	7.9210259
tan A	0.3727024	9.8298192 n	9.8781421	0.1948246 n
A	67° 1′ 34″.65	145° 56′ 56″.80	217° 3′ 54″.67	302° 33′ 32″.76
$\left.\begin{matrix}\sin\\ \cos\end{matrix}\right\}$ A	9.9641106	9.9183138 n	9.9019759 n	9.9257435 n
log a	3.1216006	9.7546771	2.1037928	8.1901070

In these examples a has been regarded as positive; if a is assumed to be negative, the arc A will change by 180°; the tan A which serves only as argument need not have been written down in the preceding calculation.

I.

TABLE

OF BRIGGS' OR COMMON

OGARITHMS

OF THE NATURAL NUMBERS

FROM 1 TO 100000.

N.	Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.
0	–	50	698 9700	100	000 0000	150	176 0913	200	301 0300
1	000 0000	51	707 5702	101	004 3214	151	178 9769	201	303 1961
2	301 0300	52	716 0033	102	008 6002	152	181 8436	202	305 3514
3	477 1213	53	724 2759	103	012 8372	153	184 6914	203	307 4960
4	602 0600	54	732 3938	104	017 0333	154	187 5207	204	309 6302
5	698 9700	55	740 3627	105	021 1893	155	190 3317	205	311 7539
6	778 1513	56	748 1880	106	025 3059	156	193 1246	206	313 8672
7	845 0980	57	755 8749	107	029 3838	157	195 8997	207	315 9703
8	903 0900	58	763 4280	108	033 4238	158	198 6571	208	318 0633
9	954 2425	59	770 8520	109	037 4265	159	201 3971	209	320 1463
10	000 0000	60	778 1513	110	041 3927	160	204 1200	210	322 2193
11	041 3927	61	785 3298	111	045 3230	161	206 8259	211	324 2825
12	079 1812	62	792 3917	112	049 2180	162	209 5150	212	326 3359
13	113 9434	63	799 3405	113	053 0784	163	212 1876	213	328 3796
14	146 1280	64	806 1800	114	056 9049	164	214 8438	214	330 4138
15	176 0913	65	812 9134	115	060 6978	165	217 4839	215	332 4385
16	204 1200	66	819 5439	116	064 4580	166	220 1081	216	334 4538
17	230 4489	67	826 0748	117	068 1859	167	222 7165	217	336 4597
18	255 2725	68	832 5089	118	071 8820	168	225 3093	218	338 4565
19	278 7536	69	838 8491	119	075 5470	169	227 8867	219	340 4441
20	301 0300	70	845 0980	120	079 1812	170	230 4489	220	342 4227
21	322 2193	71	851 2583	121	082 7854	171	232 9961	221	344 3923
22	342 4227	72	857 3325	122	086 3598	172	235 5284	222	346 3530
23	361 7278	73	863 3229	123	089 9051	173	238 0461	223	348 3049
24	380 2112	74	869 2317	124	093 4217	174	240 5492	224	350 2480
25	397 9400	75	875 0613	125	096 9100	175	243 0380	225	352 1825
26	414 9733	76	880 8136	126	100 3705	176	245 5127	226	354 1084
27	431 3638	77	886 4907	127	103 8037	177	247 9733	227	356 0259
28	447 1580	78	892 0946	128	107 2100	178	250 4200	228	357 9348
29	462 3980	79	897 6271	129	110 5897	179	252 8530	229	359 8355
30	477 1213	80	903 0900	130	113 9434	180	255 2725	230	361 7278
31	491 3617	81	908 4850	131	117 2713	181	257 6786	231	363 6120
32	505 1500	82	913 8139	132	120 5739	182	260 0714	232	365 4880
33	518 5139	83	919 0781	133	123 8516	183	262 4511	233	367 3559
34	531 4789	84	924 2793	134	127 1048	184	264 8178	234	369 2159
35	544 0680	85	929 4189	135	130 3338	185	267 1717	235	371 0679
36	556 3025	86	934 4985	136	133 5389	186	269 5129	236	372 9120
37	568 2017	87	939 5193	137	136 7206	187	271 8416	237	374 7483
38	579 7836	88	944 4827	138	139 8791	188	274 1578	238	376 5770
39	591 0646	89	949 3900	139	143 0148	189	276 4618	239	378 3979
40	602 0600	90	954 2425	140	146 1280	190	278 7536	240	380 2112
41	612 7839	91	959 0414	141	149 2191	191	281 0334	241	382 0170
42	623 2493	92	963 7878	142	152 2883	192	283 3012	242	383 8154
43	633 4685	93	968 4829	143	155 3360	193	285 5573	243	385 6063
44	643 4527	94	973 1279	144	158 3625	194	287 8017	244	387 3898
45	653 2125	95	977 7236	145	161 3680	195	290 0346	245	389 1661
46	662 7578	96	982 2712	146	164 3529	196	292 2561	246	390 9351
47	672 0979	97	986 7717	147	167 3173	197	294 4662	247	392 6970
48	681 2412	98	991 2261	148	170 2617	198	296 6652	248	394 4517
49	690 1961	99	995 6352	149	173 1863	199	298 8531	249	396 1993
50	698 9700	100	000 0000	150	176 0913	200	301 0300	250	397 9400
N.	Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.

0′ = 0° 0′ 0′ S. 4.685 5749 T. 5749
50 = 0 0 50 5749 5749
100 = 0 1 40 5748 5749
150 = 0 2 30 5748 5749
200 = 0 3 20 5748 5750

Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.
97 9400	300	477 1213	350	544 0680	400	602 0600	450	653 2125
99 6737	301	478 5665	351	545 3071	401	603 1444	451	654 1765
01 4005	302	480 0069	352	546 5427	402	604 2261	452	655 1384
03 1205	303	481 4426	353	547 7747	403	605 3050	453	656 0982
04 8337	304	482 8736	354	549 0033	404	606 3814	454	657 0559
06 5402	305	484 2998	355	550 2284	405	607 4550	455	658 0114
08 2400	306	485 7214	356	551 4500	406	608 5260	456	658 9648
09 9331	307	487 1384	357	552 6682	407	609 5944	457	659 9162
11 6197	308	488 5507	358	553 8830	408	610 6602	458	660 8655
13 2998	309	489 9585	359	555 0944	409	611 7233	459	661 8127
14 9733	310	491 3617	360	556 3025	410	612 7839	460	662 7578
16 6405	311	492 7604	361	557 5072	411	613 8418	461	663 7009
18 3013	312	494 1546	362	558 7086	412	614 8972	462	664 6420
19 9557	313	495 5443	363	559 9066	413	615 9501	463	665 5810
21 6039	314	496 9296	364	561 1014	414	617 0003	464	666 5180
23 2459	315	498 3106	365	562 2929	415	618 0481	465	667 4530
24 8816	316	499 6871	366	563 4811	416	619 0933	466	668 3859
26 5113	317	501 0593	367	564 6661	417	620 1361	467	669 3169
28 1348	318	502 4271	368	565 8478	418	621 1763	468	670 2459
29 7523	319	503 7907	369	567 0264	419	622 2140	469	671 1728
31 3638	320	505 1500	370	568 2017	420	623 2493	470	672 0979
32 9693	321	506 5050	371	569 3739	421	624 2821	471	673 0209
34 5689	322	507 8559	372	570 5429	422	625 3125	472	673 9420
36 1626	323	509 2025	373	571 7088	423	626 3404	473	674 8611
37 7506	324	510 5450	374	572 8716	424	627 3659	474	675 7783
39 3327	325	511 8834	375	574 0313	425	628 3889	475	676 6936
40 9091	326	513 2176	376	575 1878	426	629 4096	476	677 6070
42 4798	327	514 5478	377	576 3414	427	630 4279	477	678 5184
44 0448	328	515 8738	378	577 4918	428	631 4438	478	679 4279
45 6042	329	517 1959	379	578 6392	429	632 4573	479	680 3355
47 1580	330	518 5139	380	579 7836	430	633 4685	480	681 2412
48 7063	331	519 8280	381	580 9250	431	634 4773	481	682 1451
50 2491	332	521 1381	382	582 0634	432	635 4837	482	683 0470
51 7864	333	522 4442	383	583 1988	433	636 4879	483	683 9471
53 3183	334	523 7465	384	584 3312	434	637 4897	484	684 8454
54 8449	335	525 0448	385	585 4607	435	638 4893	485	685 7417
56 3660	336	526 3393	386	586 5873	436	639 4865	486	686 6363
57 8819	337	527 6299	387	587 7110	437	640 4814	487	687 5290
59 3925	338	528 9167	388	588 8317	438	641 4741	488	688 4198
60 8978	339	530 1997	389	589 9496	439	642 4645	489	689 3089
62 3980	340	531 4789	390	591 0646	440	643 4527	490	690 1961
63 8930	341	532 7544	391	592 1768	441	644 4386	491	691 0815
65 3829	342	534 0261	392	593 2861	442	645 4223	492	691 9651
66 8676	343	535 2941	393	594 3926	443	646 4037	493	692 8469
68 3473	344	536 5584	394	595 4962	444	647 3830	494	693 7269
69 8220	345	537 8191	395	596 5971	445	648 3600	495	694 6052
71 2917	346	539 0761	396	597 6952	446	649 3349	496	695 4817
72 7564	347	540 3295	397	598 7905	447	650 3075	497	696 3564
74 2163	348	541 5792	398	599 8831	448	651 2780	498	697 2293
75 6712	349	542 8254	399	600 9729	449	652 2463	499	698 1005
77 1213	350	544 0680	400	602 0600	450	653 2125	500	698 9700
Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.

250″ = 0°4′ 10″ S. 4.685 5748 T. 5751
300 = 0 5 0 5747 5752
350 = 0 5 50 5747 5753
400 = 0 6 40 5746 5754
450 = 0 7 30 5745 5756

N.	Log.	N.	Log.	N.	Log.	N.	Log.	N.	Lo
500	698 9700	550	740 3627	600	778 1513	650	812 9134	700	845
501	699 8377	551	741 1516	601	778 8745	651	813 5810	701	845
502	700 7037	552	741 9391	602	779 5965	652	814 2476	702	846
503	701 5680	553	742 7251	603	780 3173	653	814 9132	703	846
504	702 4305	554	743 5098	604	781 0369	654	815 5777	704	847
505	703 2914	555	744 2930	605	781 7554	655	816 2413	705	848
506	704 1505	556	745 0748	606	782 4726	656	816 9038	706	848
507	705 0080	557	745 8552	607	783 1887	657	817 5654	707	849
508	705 8637	558	746 6342	608	783 9036	658	818 2259	708	850
509	706 7178	559	747 4118	609	784 6173	659	818 8854	709	850
510	707 5702	560	748 1880	610	785 3298	660	819 5439	710	851
511	708 4209	561	748 9629	611	786 0412	661	820 2015	711	851
512	709 2700	562	749 7363	612	786 7514	662	820 8580	712	852
513	710 1174	563	750 5084	613	787 4605	663	821 5135	713	853
514	710 9631	564	751 2791	614	788 1684	664	822 1681	714	853
515	711 8072	565	752 0484	615	788 8751	665	822 8216	715	854
516	712 6497	566	752 8164	616	789 5807	666	823 4742	716	854
517	713 4905	567	753 5831	617	790 2852	667	824 1258	717	855
518	714 3298	568	754 3483	618	790 9885	668	824 7765	718	856
519	715 1674	569	755 1123	619	791 6906	669	825 4261	719	856
520	716 0033	570	755 8749	620	792 3917	670	826 0748	720	857
521	716 8377	571	756 6361	621	793 0916	671	826 7225	721	857
522	717 6705	572	757 3960	622	793 7904	672	827 3693	722	858
523	718 5017	573	758 1546	623	794 4880	673	828 0151	723	859
524	719 3313	574	758 9119	624	795 1846	674	828 6599	724	859
525	720 1593	575	759 6678	625	795 8800	675	829 3038	725	860
526	720 9857	576	760 4225	626	796 5743	676	829 9467	726	860
527	721 8106	577	761 1758	627	797 2675	677	830 5887	727	861
528	722 6339	578	761 9278	628	797 9596	678	831 2297	728	862
529	723 4557	579	762 6786	629	798 6506	679	831 8698	729	862
530	724 2759	580	763 4280	630	799 3405	680	832 5089	730	863
531	725 0945	581	764 1761	631	800 0294	681	833 1471	731	863
532	725 9116	582	764 9230	632	800 7171	682	833 7844	732	864
533	726 7272	583	765 6686	633	801 4037	683	834 4207	733	865
534	727 5413	584	766 4128	634	802 0893	684	835 0561	734	865
535	728 3538	585	767 1559	635	802 7737	685	835 6906	735	866
536	729 1648	586	767 8976	636	803 4571	686	836 3241	736	866
537	729 9743	587	768 6381	637	804 1394	687	836 9567	737	867
538	730 7823	588	769 3773	638	804 8207	688	837 5884	738	868
539	731 5888	589	770 1153	639	805 5009	689	838 2192	739	868
540	732 3938	590	770 8520	640	806 1800	690	838 8491	740	869
541	733 1973	591	771 5875	641	806 8580	691	839 4780	741	869
542	733 9993	592	772 3217	642	807 5350	692	840 1061	742	870
543	734 7998	593	773 0547	643	808 2110	693	840 7332	743	870
544	735 5989	594	773 7864	644	808 8859	694	841 3595	744	871
545	736 3965	595	774 5170	645	809 5597	695	841 9848	745	872
546	737 1926	596	775 2463	646	810 2325	696	842 6092	746	872
547	737 9873	597	775 9743	647	810 9043	697	843 2328	747	873
548	738 7806	598	776 7012	648	811 5750	698	843 8554	748	873
549	739 5723	599	777 4268	649	812 2447	699	844 4772	749	874
550	740 3627	600	778 1513	650	812 9134	700	845 0980	750	875
N.	Log.	N.	Log.	N.	Log.	N.	Log.	N.	Lo

500″ = 0° 8′ 20″ S. 4.685 5744 T. 5757
550 = 0 9 10 5744 5759
600 = 0 10 0 5743 5761
650 = 0 10 50 5741 5763
700 = 0 11 40 5740 5765

Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.
875 0613	800	903 0900	850	929 4189	900	954 2425	950	977 7236
875 6399	801	903 6325	851	929 9296	901	954 7248	951	978 1805
876 2178	802	904 1744	852	930 4396	902	955 2065	952	978 6369
876 7950	803	904 7155	853	930 9490	903	955 6878	953	979 0929
877 3713	804	905 2560	854	931 4579	904	956 1684	954	979 5484
877 9470	805	905 7959	855	931 9661	905	956 6486	955	980 0034
878 5218	806	906 3350	856	932 4738	906	957 1282	956	980 4579
879 0959	807	906 8735	857	932 9808	907	957 6073	957	980 9119
879 6692	808	907 4114	858	933 4873	908	958 0858	958	981 3655
880 2418	809	907 9485	859	933 9932	909	958 5639	959	981 8186
880 8136	810	908 4850	860	934 4985	910	959 0414	960	982 2712
881 3847	811	909 0209	861	935 0032	911	959 5184	961	982 7234
881 9550	812	909 5560	862	935 5073	912	959 9948	962	983 1751
882 5245	813	910 0905	863	936 0108	913	960 4708	963	983 6263
883 0934	814	910 6244	864	936 5137	914	960 9462	964	984 0770
883 6614	815	911 1576	865	937 0161	915	961 4211	965	984 5273
884 2288	816	911 6902	866	937 5179	916	961 8955	966	984 9771
884 7954	817	912 2221	867	938 0191	917	962 3693	967	985 4265
885 3612	818	912 7533	868	938 5197	918	962 8427	968	985 8754
885 9263	819	913 2839	869	939 0198	919	963 3155	969	986 3238
886 4907	820	913 8139	870	939 5193	920	963 7878	970	986 7717
887 0544	821	914 3432	871	940 0182	921	964 2596	971	987 2192
887 6173	822	914 8718	872	940 5165	922	964 7309	972	987 6663
888 1795	823	915 3998	873	941 0142	923	965 2017	973	988 1128
888 7410	824	915 9272	874	941 5114	924	965 6720	974	988 5590
889 3017	825	916 4539	875	942 0081	925	966 1417	975	989 0046
889 8617	826	916 9800	876	942 5041	926	966 6110	976	989 4498
890 4210	827	917 5055	877	942 9996	927	967 0797	977	989 8946
890 9796	828	918 0303	878	943 4945	928	967 5480	978	990 3389
891 5375	829	918 5545	879	943 9889	929	968 0157.	979	990 7827
892 0946	830	919 0781	880	944 4827	930	968 4829	980	991 2261
892 6510	831	919 6010	881	944 9759	931	968 9497	981	991 6690
893 2068	832	920 1233	882	945 4686	932	969 4159	982	992 1115
893 7618	833	920 6450	883	945 9607	933	969 8816	983	992 5535
894 3161	834	921 1661	884	946 4523	934	970 3469	984	992 9951
894 8697	835	921 6865	885	946 9433	935	970 8116	985	993 4362
895 4225	836	922 2063	886	947 4337	936	971 2758	986	993 8769
895 9747	837	922 7255	887	947 9236	937	971 7396	987	994 3172
896 5262	838	923 2440	888	948 4130	938	972 2028	988	994 7569
897 0770	839	923 7620	889	948 9018	939	972 6656	989	995 1963
897 6271	840	924 2793	890	949 3900	940	973 1279	990	995 6352
898 1765	841	924 7960	891	949 8777	941	973 5896	991	996 0737
898 7252	842	925 3121	892	950 3649	942	974 0509	992	996 5117
899 2732	843	925 8276	893	950 8515	943	974 5117	993	996 9492
899 8205	844	926 3424	894	951 3375	944	974 9720	994	997 3864
900 3671	845	926 8567	895	951 8230	945	975 4318	995	997 8231
900 9131	846	927 3704	896	952 3080	946	975 8911	996	998 2593
901 4583	847	927 8834	897	952 7924	947	976 3500	997	998 6952
902 0029	848	928 3959	898	953 2763	948	976 8083	998	999 1305
902 5468	849	928 9077	899	953 7597	949	977 2662	999	999 5655
903 0900	850	929 4189	900	954 2425	950	977 7236	1000	000 0000
Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.

750″ = 0°12′30″ S. 4.685 5739 T. 5768
800 = 0 13 20 5738 5770
850 = 0 14 10 5736 5773
900 = 0 15 0 5735 5776
950 = 0 15 50 5733 5779

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1000	000 0000	0434	0869	1303	1737	2171	2605	3039	3473	3907
01	4341	4775	5208	5642	6076	6510	6943	7377	7810	8244
02	8677	9111	9544	9977	0̅411	0̅844	1̅277	1̅710	2̅143	2̅576
03	001 3009	3442	3875	4308	4741	5174	5607	6039	6472	6905
04	7337	7770	8202	8635	9067	9499	9932	0̅364	0̅796	1̅228
05	002 1661	2093	2525	2957	3389	3821	4253	4685	5116	5548
06	5980	6411	6843	7275	7706	8138	8569	9001	9432	9863
07	003 0295	0726	1157	1588	2019	2451	2882	3313	3744	4174
08	4605	5036	5467	5898	6328	6759	7190	7620	8051	8481
09	8912	9342	9772	0̅203	0̅633	1̅063	1̅493	1̅924	2̅354	2̅784
1010	004 3214	3644	4074	4504	4933	5363	5793	6223	6652	7082
11	7512	7941	8371	8800	9229	9659	0̅088	0̅517	0̅947	1̅376
12	005 1805	2234	2663	3092	3521	3950	4379	4808	5237	5666
13	6094	6523	6952	7380	7809	8238	8666	9094	9523	9951
14	006 0380	0808	1236	1664	2092	2521	2949	3377	3805	4233
15	4660	5088	5516	5944	6372	6799	7227	7655	8082	8510
16	8937	9365	9792	0̅219	0̅647	1̅074	1̅501	1̅928	2̅355	2̅782
17	007 3210	3637	4064	4490	4917	5344	5771	6198	6624	7051
18	7478	7904	8331	8757	9184	9610	0̅037	0̅463	0̅889	1̅316
19	008 1742	2168	2594	3020	3446	3872	4298	4724	5150	5576
1020	6002	6427	6853	7279	7704	8130	8556	8981	9407	9832
21	009 0257	0683	1108	1533	1959	2384	2809	3234	3659	4084
22	4509	4934	5359	5784	6208	6633	7058	7483	7907	8332
23	8756	9181	9605	0̅030	0̅454	0̅878	1̅303	1̅727	2̅151	2̅575
24	010 3000	3424	3848	4272	4696	5120	5544	5967	6391	6815
25	7239	7662	8086	8510	8933	9357	9780	0̅204	0̅627	1̅050
26	011 1474	1897	2320	2743	3166	3590	4013	4436	4859	5282
27	5704	6127	6550	6973	7396	7818	8241	8664	9086	9509
28	9931	0̅354	0̅776	1̅198	1̅621	2̅043	2̅465	2̅887	3̅310	3̅732
29	012 4154	4576	4998	5420	5842	6264	6685	7107	7529	7951
1030	8372	8794	9215	9637	0̅059	0̅480	0̅901	1̅323	1̅744	2̅165
31	013 2587	3008	3429	3850	4271	4692	5113	5534	5955	6376
32	6797	7218	7639	8059	8480	8901	9321	9742	0̅162	0̅583
33	014 1003	1424	1844	2264	2685	3105	3525	3945	4365	4785
34	5205	5625	6045	6465	6885	7305	7725	8144	8564	8984
35	9403	9823	0̅243	0̅662	1̅082	1̅501	1̅920	2̅340	2̅759	3̅178
36	015 3598	4017	4436	4855	5274	5693	6112	6531	6950	7369
37	7788	8206	8625	9044	9462	9881	0̅300	0̅718	1̅137	1̅555
38	016 1974	2392	2810	3229	3647	4065	4483	4901	5319	5737
39	6155	6573	6991	7409	7827	8245	8663	9080	9498	9916
1040	017 0333	0751	1168	1586	2003	2421	2838	3256	3673	4090
41	4507	4924	5342	5759	6176	6593	7010	7427	7844	8260
42	8677	9094	9511	9927	0̅344	0̅761	1̅177	1̅594	2̅010	2̅427
43	018 2843	3259	3676	4092	4508	4925	5341	5757	6173	6589
44	7005	7421	7837	8253	8669	9084	9500	9916	0̅332	0̅747
45	019 1163	1578	1994	2410	2825	3240	3656	4071	4486	4902
46	5317	5732	6147	6562	6977	7392	7807	8222	8637	9052
47	9467	9882	0̅296	0̅711	1̅126	1̅540	1̅955	2̅369	2̅784	3̅198
48	020 3613	4027	4442	4856	5270	5684	6099	6513	6927	7341
49	7755	8169	8583	8997	9411	9824	0̅238	0̅652	1̅066	1̅479
1050	021 1893	2307	2720	3134	3547	3961	4374	4787	5201	5614
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	435	434	433
1	43.5	43.4	43.3
2	87.0	86.8	86.6
3	130.5	130.2	129.9
4	174.0	173.6	173.2
5	217.5	217.0	216.5
6	261.0	260.4	259.8
7	304.5	303.8	303.1
8	348.0	347.2	346.4
9	391.5	390.6	389.7

	432	431	430
1	43.2	43.1	43.0
2	86.4	86.2	86.0
3	129.6	129.3	129.0
4	172.8	172.4	172.0
5	216.0	215.5	215.0
6	259.2	258.6	258.0
7	302.4	301.7	301.0
8	345.6	344.8	344.0
9	388.8	387.9	387.0

	429	428	427
1	42.9	42.8	42.7
2	85.8	85.6	85.4
3	128.7	128.4	128.1
4	171.6	171.2	170.8
5	214.5	214.0	213.5
6	257.4	256.8	256.2
7	300.3	299.6	298.9
8	343.2	342.4	341.6
9	386.1	385.2	384.3

	426	425	424
1	42.6	42.5	42.4
2	85.2	85.0	84.8
3	127.8	127.5	127.2
4	170.4	170.0	169.6
5	213.0	212.5	212.0
6	255.6	255.0	254.4
7	298.2	297.5	296.8
8	340.8	340.0	339.2
9	383.4	382.5	381.6

	423	422	421
1	42.3	42.2	42.1
2	84.6	84.4	84.2
3	126.9	126.6	126.3
4	169.2	168.8	168.4
5	211.5	211.0	210.5
6	253.8	253.2	252.6
7	296.1	295.4	294.7
8	338.4	337.6	336.8
9	380.7	379.8	378.9

	420	419	418
1	42.0	41.9	41.8
2	84.0	83.8	83.6
3	126.0	125.7	125.4
4	168.0	167.6	167.2
5	210.0	209.5	209.0
6	252.0	251.4	250.8
7	294.0	293.3	292.6
8	336.0	335.2	334.4
9	378.0	377.1	376.2

	417	416	415
1	41.7	41.6	41.5
2	83.4	83.2	83.0
3	125.1	124.8	124.5
4	166.8	166.4	166.0
5	208.5	208.0	207.5
6	250.2	249.6	249.0
7	291.9	291.2	290.5
8	333.6	332.8	332.0
9	375.3	374.4	373.5

P. P.

		S.	T.
10000″ = 2° 46′ 40″	1000″ = 0° 16′ 40″	4.685 5732	5783
10100 = 2 48 20	1010 = 0 16 50	5731	5783
10200 = 2 50 0	1020 = 0 17 0	5731	5784
10300 = 2 51 40	1030 = 0 17 10	5731	5785
10400 = 2 53 20	1040 = 0 17 20	5730	5785

N.	0	1	2	3	4	5	6	7	8	9
1050	021 1893	2307	2720	3134	3547	3961	4374	4787	5201	5614
51	6027	6440	6854	7267	7680	8093	8506	8919	9332	9745
52	022 0157	0570	0983	1396	1808	2221	2634	3046	3459	3871
53	4284	4696	5109	5521	5933	6345	6758	7170	7582	7994
54	8406	8818	9230	9642	0̄054	0̄466	0̄878	1̄289	1̄701	2̄113
55	023 2525	2936	3348	3759	4171	4582	4994	5405	5817	6228
56	6639	7050	7462	7873	8284	8695	9106	9517	9928	0̄339
57	024 0750	1161	1572	1982	2393	2804	3214	3625	4036	4446
58	4857	5267	5678	6088	6498	6909	7319	7729	8139	8549
59	8960	9370	9780	0̄190	0̄600	1̄010	1̄419	1̄829	2̄239	2̄649
1060	025 3059	3468	3878	4288	4697	5107	5516	5926	6335	6744
61	7154	7563	7972	8382	8791	9200	9609	0̄018	0̄427	0̄836
62	026 1245	1654	2063	2472	2881	3289	3698	4107	4515	4924
63	5333	5741	6150	6558	6967	7375	7783	8192	8600	9008
64	9416	9824	0̄233	0̄641	1̄049	1̄457	1̄865	2̄273	2̄680	3̄088
65	027 3496	3904	4312	4719	5127	5535	5942	6350	6757	7165
66	7572	7979	8387	8794	9201	9609	0̄016	0̄423	0̄830	1̄237
67	028 1644	2051	2458	2865	3272	3679	4086	4492	4899	5306
68	5713	6119	6526	6932	7339	7745	8152	8558	8964	9371
69	9777	0̄183	0̄590	0̄996	1̄402	1̄808	2̄214	2̄620	3̄026	3̄432
1070	029 3838	4244	4649	5055	5461	5867	6272	6678	7084	7489
71	7895	8300	8706	9111	9516	9922	0̄327	0̄732	1̄138	1̄543
72	030 1948	2353	2758	3163	3568	3973	4378	4783	5188	5592
73	5997	6402	6807	7211	7616	8020	8425	8830	9234	9638
74	031 0043	0447	0851	1256	1660	2064	2468	2872	3277	3681
75	4085	4489	4893	5296	5700	6104	6508	6912	7315	7719
76	8123	8526	8930	9333	9737	0̄140	0̄544	0̄947	1̄350	1̄754
77	032 2157	2560	2963	3367	3770	4173	4576	4979	5382	5785
78	6188	6590	6993	7396	7799	8201	8604	9007	9409	9812
79	033 0214	0617	1019	1422	1824	2226	2629	3031	3433	3835
1080	4238	4640	5042	5444	5846	6248	6650	7052	7453	7855
81	8257	8659	9060	9462	9864	0̄265	0̄667	1̄068	1̄470	1̄871
82	034 2273	2674	3075	3477	3878	4279	4680	5081	5482	5884
83	6285	6686	7087	7487	7888	8289	8690	9091	9491	9892
84	035 0293	0693	1094	1495	1895	2296	2696	3096	3497	3897
85	4297	4698	5098	5498	5898	6298	6698	7098	7498	7898
86	8298	8698	9098	9498	9898	0̄297	0̄697	1̄097	1̄496	1̄896
87	036 2295	2695	3094	3494	3893	4293	4692	5091	5491	5890
88	6289	6688	7087	7486	7885	8284	8683	9082	9481	9880
89	037 0279	0678	1076	1475	1874	2272	2671	3070	3468	3867
1090	4265	4663	5062	5460	5858	6257	6655	7053	7451	7849
91	8248	8646	9044	9442	9839	0̄237	0̄635	1̄033	1̄431	1̄829
92	038 2226	2624	3022	3419	3817	4214	4612	5009	5407	5804
93	6202	6599	6996	7393	7791	8188	8585	8982	9379	9776
94	039 0173	0570	0967	1364	1761	2158	2554	2951	3348	3745
95	4141	4538	4934	5331	5727	6124	6520	6917	7313	7709
96	8106	8502	8898	9294	9690	0̄086	0̄482	0̄878	1̄274	1̄670
97	040 2066	2462	2858	3254	3650	4045	4441	4837	5232	5628
98	6023	6419	6814	7210	7605	8001	8396	8791	9187	9582
99	9977	0̄372	0̄767	1̄162	1̄557	1̄952	2̄347	2̄742	3̄137	3̄532
1100	041 3927	4322	4716	5111	5506	5900	6295	6690	7084	7479
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	414	413	412
1	41.4	41.3	41.2
2	82.8	82.6	82.4
3	124.2	123.9	123.6
4	165.6	165.2	164.8
5	207.0	206.5	206.0
6	248.4	247.8	247.2
7	289.8	289.1	288.4
8	331.2	330.4	329.6
9	372.6	371.7	370.8

	411	410	409
1	41.1	41.0	40.9
2	82.2	82.0	81.8
3	123.3	123.0	122.7
4	164.4	164.0	163.6
5	205.5	205.0	204.5
6	246.6	246.0	245.4
7	287.7	287.0	286.3
8	328.8	328.0	327.2
9	369.9	369.0	368.1

	408	407	406
1	40.8	40.7	40.6
2	81.6	81.4	81.2
3	122.4	122.1	121.8
4	163.2	162.8	162.4
5	204.0	203.5	203.0
6	244.8	244.2	243.6
7	285.6	284.9	284.2
8	326.4	325.6	324.8
9	367.2	366.3	365.4

	405	404	403
1	40.5	40.4	40.3
2	81.0	80.8	80.6
3	121.5	121.2	120.9
4	162.0	161.6	161.2
5	202.5	202.0	201.5
6	243.0	242.4	241.8
7	283.5	282.8	282.1
8	324.0	323.2	322.4
9	364.5	363.6	362.7

	402	401	400
1	40.2	40.1	40.0
2	80.4	80.2	80.0
3	120.6	120.3	120.0
4	160.8	160.4	160.0
5	201.0	200.5	200.0
6	241.2	240.6	240.0
7	281.4	280.7	280.0
8	321.6	320.8	320.0
9	361.8	360.9	360.0

	399	398	397
1	39.9	39.8	39.7
2	79.8	79.6	79.4
3	119.7	119.4	119.1
4	159.6	159.2	158.8
5	199.5	199.0	198.5
6	239.4	238.8	238.2
7	279.3	278.6	277.9
8	319.2	318.4	317.6
9	359.1	358.2	357.3

	396	395	394
1	39.6	39.5	39.4
2	79.2	79.0	78.8
3	118.8	118.5	118.2
4	158.4	158.0	157.6
5	198.0	197.5	197.0
6	237.6	237.0	236.4
7	277.2	276.5	275.8
8	316.8	316.0	315.2
9	356.4	355.5	354.6

P. P.

10500″ = 2° 55′ 0″	1050″ = 0° 17′ 30″	S. 4.685 5730	T. 5786
10600 = 2 56 40	1060 = 0 17 40	5730	5787
10700 = 2 58 20	1070 = 0 17 50	5729	5788
10800 = 3 0 0	1080 = 0 18 0	5729	5788
10900 = 3 1 40	1090 = 0 18 10	5728	5789

N.	0	1	2	3	4	5	6	7	8	9
1100	041 3927	4322	4716	5111	5506	5900	6295	6690	7084	7479
01	7873	8268	8662	9056	9451	9845	0̅239	0̅633	1̅028	1̅422
02	042 1816	2210	2604	2998	3392	3786	4180	4574	4968	5361
03	5755	6149	6543	6936	7330	7723	8117	8510	8904	9297
04	9691	0̅084	0̅477	0̅871	1̅264	1̅657	2̅050	2̅444	2̅837	3̅230
05	043 3623	4016	4409	4802	5195	5587	5980	6373	6766	7159
06	7551	7944	8337	8729	9122	9514	9907	0̅299	0̅692	1̅084
07	044 1476	1869	2261	2653	3045	3437	3829	4222	4614	5006
08	5398	5790	6181	6573	6965	7357	7749	8140	8532	8924
09	9315	9707	0̅099	0̅490	0̅882	1̅273	1̅664	2̅056	2̅447	2̅839
1110	045 3230	3621	4012	4403	4795	5186	5577	5968	6359	6750
11	7141	7531	7922	8313	8704	9095	9485	9876	0̅267	0̅657
12	046 1048	1438	1829	2219	2610	3000	3391	3781	4171	4561
13	4952	5342	5732	6122	6512	6902	7292	7682	8072	8462
14	8852	9242	9632	0̅021	0̅411	0̅801	1̅190	1̅580	1̅970	2̅359
15	047 2749	3138	3528	3917	4306	4696	5085	5474	5864	6253
16	6642	7031	7420	7809	8198	8587	8976	9365	9754	0̅143
17	048 0532	0921	1309	1698	2087	2475	2864	3253	3641	4030
18	4418	4806	5195	5583	5972	6360	6748	7136	7525	7913
19	8301	8689	9077	9465	9853	0̅241	0̅629	1̅017	1̅405	1̅792
1120	049 2180	2568	2956	3343	3731	4119	4506	4894	5281	5669
21	6056	6444	6831	7218	7606	7993	8380	8767	9154	9541
22	9929	0̅316	0̅703	1̅090	1̅477	1̅863	2̅250	2̅637	3̅024	3̅411
23	050 3798	4184	4571	4958	5344	5731	6117	6504	6890	7277
24	7663	8049	8436	8822	9208	9595	9981	0̅367	0̅753	1̅139
25	051 1525	1911	2297	2683	3069	3455	3841	4227	4612	4998
26	5384	5770	6155	6541	6926	7312	7697	8083	8468	8854
27	9239	9624	0̅010	0̅395	0̅780	1̅166	1̅551	1̅936	2̅321	2̅706
28	052 3091	3476	3861	4246	4631	5016	5400	5785	6170	6555
29	6939	7324	7709	8093	8478	8862	9247	9631	0̅016	0̅400
1130	053 0784	1169	1553	1937	2321	2706	3090	3474	3858	4242
31	4626	5010	5394	5778	6162	6546	6929	7313	7697	8081
32	8464	8848	9232	9615	9999	0̅382	0̅766	1̅149	1̅532	1̅916
33	054 2299	2682	3066	3449	3832	4215	4598	4981	5365	5748
34	6131	6514	6896	7279	7662	8045	8428	8811	9193	9576
35	9959	0̅341	0̅724	1̅106	1̅489	1̅871	2̅254	2̅636	3̅019	3̅401
36	055 3783	4166	4548	4930	5312	5694	6077	6459	6841	7223
37	7605	7987	8369	8750	9132	9514	9896	0̅278	0̅659	1̅041
38	056 1423	1804	2186	2567	2949	3330	3712	4093	4475	4856
39	5237	5619	6000	6381	6762	7143	7524	7905	8287	8668
1140	9049	9429	9810	0̅191	0̅572	0̅953	1̅334	1̅714	2̅095	2̅476
41	057 2856	3237	3618	3998	4379	4759	5140	5520	5900	6281
42	6661	7041	7422	7802	8182	8562	8942	9322	9702	0̅082
43	058 0462	0842	1222	1602	1982	2362	2741	3121	3501	3881
44	4260	4640	5019	5399	5778	6158	6537	6917	7296	7676
45	8055	8434	8813	9193	9572	9951	0̅330	0̅709	1̅088	1̅467
46	059 1846	2225	2604	2983	3362	3741	4119	4498	4877	5256
47	5634	6013	6391	6770	7148	7527	7905	8284	8662	9041
48	9419	9797	0̅175	0̅554	0̅932	1̅310	1̅688	2̅066	2̅444	2̅822
49	060 3200	3578	3956	4334	4712	5090	5468	5845	6223	6601
1150	6978	7356	7734	8111	8489	8866	9244	9621	9999	0̅376
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	395	394	393
1	39.5	39.4	39.3
2	79.0	78.8	78.6
3	118.5	118.2	117.9
4	158.0	157.6	157.2
5	197.5	197.0	196.5
6	237.0	236.4	235.8
7	276.5	275.8	275.1
8	316.0	315.2	314.4
9	355.5	354.6	353.7

	392	391	390
1	39.2	39.1	39.0
2	78.4	78.2	78.0
3	117.6	117.3	117.0
4	156.8	156.4	156.0
5	196.0	195.5	195.0
6	235.2	234.6	234.0
7	274.4	273.7	273.0
8	313.6	312.8	312.0
9	352.8	351.9	351.0

	389	388
1	38.9	38.8
2	77.8	77.6
3	116.7	116.4
4	155.6	155.2
5	194.5	194.0
6	233.4	232.8
7	272.3	271.6
8	311.2	310.4
9	350.1	349.2

	387	386	385
1	38.7	38.6	38.5
2	77.4	77.2	77.0
3	116.1	115.8	115.5
4	154.8	154.4	154.0
5	193.5	193.0	192.5
6	232.2	231.6	231.0
7	270.9	270.2	269.5
8	309.6	308.8	308.0
9	348.3	347.4	346.5

	384	383	382
1	38.4	38.3	38.2
2	76.8	76.6	76.4
3	115.2	114.9	114.6
4	153.6	153.2	152.8
5	192.0	191.5	191.0
6	230.4	229.8	229.2
7	268.8	268.1	267.4
8	307.2	306.4	305.6
9	345.6	344.7	343.8

	381	380
1	38.1	38.0
2	76.2	76.0
3	114.3	114.0
4	152.4	152.0
5	190.5	190.0
6	228.6	228.0
7	266.7	266.0
8	304.8	304.0
9	342.9	342.0

	379	378	377
1	37.9	37.8	37.7
2	75.8	75.6	75.4
3	113.7	113.4	113.1
4	151.6	151.2	150.8
5	189.5	189.0	188.5
6	227.4	226.8	226.2
7	265.3	264.6	263.9
8	303.2	302.4	301.6
9	341.1	340.2	339.3

P. P.

11000″ = 3° 3′ 20″	1100″ = 0° 18′ 20″	S. 4.685 5728	T. 5790
11100 = 3 5 0	1110 = 0 18 30	5728	5791
11200 = 3 6 40	1120 = 0 18 40	5727	5791
11300 = 3 8 20	1130 = 0 18 50	5727	5792
11400 = 3 10 0	1140 = 0 19 0	5727	5793

N.	0	1	2	3	4	5	6	7	8	9
1150	060 6978	7356	7734	8111	8489	8866	9244	9621	9999	0̄376
51	061 0753	1131	1508	1885	2262	2639	3017	3394	3771	4148
52	4525	4902	5279	5656	6032	6409	6786	7163	7540	7916
53	8293	8670	9046	9423	9799	0̄176	0̄552	0̄929	1̄305	1̄682
54	062 2058	2434	2811	3187	3563	3939	4316	4692	5068	5444
55	5820	6196	6572	6948	7324	7699	8075	8451	8827	9203
56	9578	9954	0̄330	0̄705	1̄081	1̄456	1̄832	2̄207	2̄583	2̄958
57	063 3334	3709	4084	4460	4835	5210	5585	5960	6335	6711
58	7086	7461	7836	8211	8585	8960	9335	9710	0̄085	0̄460
59	064 0834	1209	1584	1958	2333	2708	3082	3457	3831	4205
1160	4580	4954	5329	5703	6077	6451	6826	7200	7574	7948
61	8322	8696	9070	9444	9818	0̄192	0̄566	0̄940	1̄314	1̄688
62	065 2061	2435	2809	3182	3556	3930	4303	4677	5050	5424
63	5797	6171	6544	6917	7291	7664	8037	8410	8784	9157
64	9530	9903	0̄276	0̄649	1̄022	1̄395	1̄768	2̄141	2̄514	2̄886
65	066 3259	3632	4005	4377	4750	5123	5495	5868	6241	6613
66	6986	7358	7730	8103	8475	8847	9220	9592	9964	0̄336
67	067 0709	1081	1453	1825	2197	2569	2941	3313	3685	4057
68	4428	4800	5172	5544	5915	6287	6659	7030	7402	7774
69	8145	8517	8888	9259	9631	0̄002	0̄374	0̄745	1̄116	1̄487
1170	068 1859	2230	2601	2972	3343	3714	4085	4456	4827	5198
71	5569	5940	6311	6681	7052	7423	7794	8164	8535	8906
72	9276	9647	0̄017	0̄388	0̄758	1̄129	1̄499	1̄869	2̄240	2̄610
73	069 2980	3350	3721	4091	4461	4831	5201	5571	5941	6311
74	6681	7051	7421	7791	8160	8530	8900	9270	9639	0̄009
75	070 0379	0748	1118	1487	1857	2226	2596	2965	3335	3704
76	4073	4442	4812	5181	5550	5919	6288	6658	7027	7396
77	7765	8134	8503	8871	9240	9609	9978	0̄347	0̄715	1̄084
78	071 1453	1822	2190	2559	2927	3296	3664	4033	4401	4770
79	5138	5506	5875	6243	6611	6979	7348	7716	8084	8452
1180	8820	9188	9556	9924	0̄292	0̄660	1̄028	1̄396	1̄763	2̄131
81	072 2499	2867	3234	3602	3970	4337	4705	5072	5440	5807
82	6175	6542	6910	7277	7644	8011	8379	8746	9113	9480
83	9847	0̄215	0̄582	0̄949	1̄316	1̄683	2̄050	2̄416	2̄783	3̄150
84	073 3517	3884	4251	4617	4984	5351	5717	6084	6450	6817
85	7184	7550	7916	8283	8649	9016	9382	9748	0̄114	0̄481
86	074 0847	1213	1579	1945	2311	2677	3043	3409	3775	4141
87	4507	4873	5239	5605	5970	6336	6702	7068	7433	7799
88	8164	8530	8895	9261	9626	9992	0̄357	0̄723	1̄088	1̄453
89	075 1819	2184	2549	2914	3279	3644	4010	4375	4740	5105
1190	5470	5835	6199	6564	6929	7294	7659	8024	8388	8753
91	9118	9482	9847	0̄211	0̄576	0̄940	1̄305	1̄669	2̄034	2̄398
92	076 2763	3127	3491	3855	4220	4584	4948	5312	5676	6040
93	6404	6768	7132	7496	7860	8224	8588	8952	9316	9680
94	077 0043	0407	0771	1134	1498	1862	2225	2589	2952	3316
95	3679	4042	4406	4769	5133	5496	5859	6222	6585	6949
96	7312	7675	8038	8401	8764	9127	9490	9853	0̄216	0̄579
97	078 0942	1304	1667	2030	2393	2755	3118	3480	3843	4206
98	4568	4931	5293	5656	6018	6380	6743	7105	7467	7830
99	8192	8554	8916	9278	9640	0̄003	0̄365	0̄727	1̄089	1̄451
1200	079 1812	2174	2536	2898	3260	3622	3983	4345	4707	5068
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	378	377	376
1	37.8	37.7	37.6
2	75.6	75.4	75.2
3	113.4	113.1	112.8
4	151.2	150.8	150.4
5	189.0	188.5	188.0
6	226.8	226.2	225.6
7	264.6	263.9	263.2
8	302.4	301.6	300.8
9	340.2	339.3	338.4

	375	374
1	37.5	37.4
2	75.0	74.8
3	112.5	112.2
4	150.0	149.6
5	187.5	187.0
6	225.0	224.4
7	262.5	261.8
8	300.0	299.2
9	337.5	336.6

	373	372	371
1	37.3	37.2	37.1
2	74.6	74.4	74.2
3	111.9	111.6	111.3
4	149.2	148.8	148.4
5	186.5	186.0	185.5
6	223.8	223.2	222.6
7	261.1	260.4	259.7
8	298.4	297.6	296.8
9	335.7	334.8	333.9

	370	369
1	37.0	36.9
2	74.0	73.8
3	111.0	110.7
4	148.0	147.6
5	185.0	184.5
6	222.0	221.4
7	259.0	258.3
8	296.0	295.2
9	333.0	332.1

	368	567	366
1	36.8	36.7	36.6
2	73.6	73.4	73.2
3	110.4	110.1	109.8
4	147.2	146.8	146.4
5	184.0	183.5	183.0
6	220.8	220.2	219.6
7	257.6	256.9	256.2
8	294.4	293.6	292.8
9	331.2	330.3	329.4

	365	364
1	36.5	36.4
2	73.0	72.8
3	109.5	109.2
4	146.0	145.6
5	182.5	182.0
6	219.0	218.4
7	255.5	254.8
8	292.0	291.2
9	328.5	327.6

	363	362	361
1	36.3	36.2	36.1
2	72.6	72.4	72.2
3	108.9	108.6	108.3
4	145.2	144.8	144.4
5	181.5	181.0	180.5
6	217.8	217.2	216.6
7	254.1	253.4	252.7
8	290.4	289.6	288.8
9	326.7	325.8	324.9

P. P.

11500″ = 3° 11′ 40″ 1150″ = 0° 19′ 10″ S. 4.685 5726 T. 5794
11600 = 3 13 20 1160 = 0 19 20 5726 5794
11700 = 3 15 0 1170 = 0 19 30 5725 5795
11800 = 3 16 40 1180 = 0 19 40 5725 5796
11900 = 3 18 20 1190 = 0 19 50 5725 5797

N.	0	1	2	3	4	5	6	7	8	9
1200	079 1812	2174	2536	2898	3260	3622	3983	4345	4707	5068
01	5430	5792	6153	6515	6876	7238	7599	7961	8322	8683
02	9045	9406	9767	0̅128	0̅490	0̅851	1̅212	1̅573	1̅934	2̅295
03	080 2656	3017	3378	3739	4100	4461	4822	5183	5543	5904
04	6265	6626	6986	7347	7707	8068	8429	8789	9150	9510
05	9870	0̅231	0̅591	0̅952	1̅312	1̅672	2̅032	2̅393	2̅753	3̅113
06	081 3473	3833	4193	4553	4913	5273	5633	5993	6353	6713
07	7073	7432	7792	8152	8512	8871	9231	9591	9950	0̅310
08	082 0669	1029	1388	1748	2107	2467	2826	3185	3545	3904
09	4263	4622	4981	5341	5700	6059	6418	6777	7136	7495
1210	7854	8213	8571	8930	9289	9648	0̅007	0̅365	0̅724	1̅083
11	083 1441	1800	2159	2517	2876	3234	3593	3951	4309	4668
12	5026	5385	5743	6101	6459	6817	7176	7534	7892	8250
13	8608	8966	9324	9682	0̅040	0̅398	0̅756	1̅114	1̅471	1̅829
14	084 2187	2545	2902	3260	3618	3975	4333	4690	5048	5405
15	5763	6120	6478	6835	7192	7550	7907	8264	8621	8979
16	9336	9693	0̅050	0̅407	0̅764	1̅121	1̅478	1̅835	2̅192	2̅549
17	085 2906	3263	3619	3976	4333	4690	5046	5403	5760	6116
18	6473	6829	7186	7542	7899	8255	8612	8968	9324	9681
19	086 0037	0393	0750	1106	1462	1818	2174	2530	2886	3242
1220	3598	3954	4310	4666	5022	5378	5734	6089	6445	6801
21	7157	7512	7868	8224	8579	8935	9290	9646	0̅001	0̅357
22	087 0712	1067	1423	1778	2133	2489	2844	3199	3554	3909
23	4265	4620	4975	5330	5685	6040	6395	6750	7104	7459
24	7814	8169	8524	8878	9233	9588	9943	0̅297	0̅652	1̅006
25	088 1361	1715	2070	2424	2779	3133	3488	3842	4196	4550
26	4905	5259	5613	5967	6321	6676	7030	7384	7738	8092
27	8446	8800	9153	9507	9861	0̅215	0̅569	0̅923	1̅276	1̅630
28	089 1984	2337	2691	3045	3398	3752	4105	4459	4812	5165
29	5519	5872	6226	6579	6932	7285	7639	7992	8345	8698
1230	9051	9404	9757	0̅110	0̅463	0̅816	1̅169	1̅522	1̅875	2̅228
31	090 2581	2933	3286	3639	3991	4344	4697	5049	5402	5755
32	6107	6460	6812	7164	7517	7869	8222	8574	8926	9279
33	9631	9983	0̅335	0̅687	1̅039	1̅392	1̅744	2̅096	2̅448	2̅800
34	091 3152	3504	3855	4207	4559	4911	5263	5614	5966	6318
35	6670	7021	7373	7724	8076	8427	8779	9130	9482	9833
36	092 0185	0536	0887	1239	1590	1941	2292	2644	2995	3346
37	3697	4048	4399	4750	5101	5452	5803	6154	6505	6856
38	7206	7557	7908	8259	8609	8960	9311	9661	0̅012	0̅363
39	093 0713	1064	1414	1764	2115	2465	2816	3166	3516	3867
1240	4217	4567	4917	5267	5618	5968	6318	6668	7018	7368
41	7718	8068	8418	8768	9117	9467	9817	0̅167	0̅517	0̅866
42	094 1216	1566	1915	2265	2614	2964	3313	3663	4012	4362
43	4711	5061	5410	5759	6109	6458	6807	7156	7506	7855
44	8204	8553	8902	9251	9600	9949	0̅298	0̅647	0̅996	1̅345
45	095 1694	2042	2391	2740	3089	3437	3786	4135	4483	4832
46	5180	5529	5877	6226	6574	6923	7271	7620	7968	8316
47	8665	9013	9361	9709	0̅057	0̅406	0̅754	1̅102	1̅450	1̅798
48	096 2146	2494	2842	3190	3538	3885	4233	4581	4929	5277
49	5624	5972	6320	6667	7015	7363	7710	8058	8405	8753
1250	9100	9448	9795	0̅142	0̅490	0̅837	1̅184	1̅531	1̅879	2̅226
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	362	361
1	36.2	36.1
2	72.4	72.2
3	108.6	108.3
4	144.8	144.4
5	181.0	180.5
6	217.2	216.6
7	253.4	252.7
8	289.6	288.8
9	325.8	324.9

	360	359	358
1	36.0	35.9	35.8
2	72.0	71.8	71.6
3	108.0	107.7	107.4
4	144.0	143.6	143.2
5	180.0	179.5	179.0
6	216.0	215.4	214.8
7	252.0	251.3	250.6
8	288.0	287.2	286.4
9	324.0	323.1	322.2

	357	356
1	35.7	35.6
2	71.4	71.2
3	107.1	106.8
4	142.8	142.4
5	178.5	178.0
6	214.2	213.6
7	249.9	249.2
8	285.6	284.8
9	321.3	320.4

	355	354
1	35.5	35.4
2	71.0	70.8
3	106.5	106.2
4	142.0	141.6
5	177.5	177.0
6	213.0	212.4
7	248.5	247.8
8	284.0	283.2
9	319.5	318.6

	353	352	351
1	35.3	35.2	35.1
2	70.6	70.4	70.2
3	105.9	105.6	105.3
4	141.2	140.8	140.4
5	176.5	176.0	175.5
6	211.8	211.2	210.6
7	247.1	246.4	245.7
8	282.4	281.6	280.8
9	317.7	316.8	315.9

	350	349
1	35.0	34.9
2	70.0	69.8
3	105.0	104.7
4	140.0	139.6
5	175.0	174.5
6	210.0	209.4
7	245.0	244.3
8	280.0	279.2
9	315.0	314.1

	348	347
1	34.8	34.7
2	69.6	69.4
3	104.4	104.1
4	139.2	138.8
5	174.0	173.5
6	208.8	208.2
7	243.6	242.9
8	278.4	277.6
9	313.2	312.3

12000″ = 3° 20′ 0″	1200″ = 0° 20′ 0″	S. 4.685 5724	T. 5798
12100 = 3 21 40	1210 = 0 20 10	5724	5798
12200 = 3 23 20	1220 = 0 20 20	5723	5799
12300 = 3 25 0	1230 = 0 20 30	5723	5800
12400 = 3 26 40	1240 = 0 20 40	5723	5801

N.	0	1	2	3	4	5	6	7	8	9
1250	096 9100	9448	9795	0̅142	0̅490	0̅837	1̅184	1̅531	1̅879	2̅226
51	097 2573	2920	3267	3614	3962	4309	4656	5003	5349	5696
52	6043	6390	6737	7084	7431	7777	8124	8471	8817	9164
53	9511	9857	0̅204	0̅550	0̅897	1̅243	1̅590	1̅936	2̅283	2̅629
54	098 2975	3322	3668	4014	4360	4707	5053	5399	5745	6091
55	6437	6783	7129	7475	7821	8167	8513	8859	9205	9551
56	9896	0̅242	0̅588	0̅934	1̅279	1̅625	1̅971	2̅316	2̅662	3̅007
57	099 3353	3698	4044	4389	4735	5080	5425	5771	6116	6461
58	6806	7152	7497	7842	8187	8532	8877	9222	9567	9912
59	100 0257	0602	0947	1292	1637	1982	2327	2671	3016	3361
1260	3705	4050	4395	4739	5084	5429	5773	6118	6462	6806
61	7151	7495	7840	8184	8528	8873	9217	9561	9905	0̅249
62	101 0594	0938	1282	1626	1970	2314	2658	3002	3346	3690
63	4034	4377	4721	5065	5409	5752	6096	6440	6784	7127
64	7471	7814	8158	8501	8845	9188	9532	9875	0̅219	0̅562
65	102 0905	1249	1592	1935	2278	2621	2965	3308	3651	3994
66	4337	4680	5023	5366	5709	6052	6395	6738	7081	7423
67	7766	8109	8452	8794	9137	9480	9822	0̅165	0̅507	0̅850
68	103 1193	1535	1877	2220	2562	2905	3247	3589	3932	4274
69	4616	4958	5301	5643	5985	6327	6669	7011	7353	7695
1270	8037	8379	8721	9063	9405	9747	0̅089	0̅430	0̅772	1̅114
71	104 1456	1797	2139	2480	2822	3164	3505	3847	4188	4530
72	4871	5213	5554	5895	6237	6578	6919	7260	7602	7943
73	8284	8625	8966	9307	9648	9989	0̅331	0̅671	1̅012	1̅353
74	105 1694	2035	2376	2717	3058	3398	3739	4080	4421	4761
75	5102	5442	5783	6124	6464	6805	7145	7486	7826	8166
76	8507	8847	9187	9528	9868	0̅208	0̅548	0̅889	1̅229	1̅569
77	106 1909	2249	2589	2929	3269	3609	3949	4289	4629	4969
78	5309	5648	5988	6328	6668	7007	7347	7687	8026	8366
79	8705	9045	9385	9724	0̅063	0̅403	0̅742	1̅082	1̅421	1̅760
1280	107 2100	2439	2778	3117	3457	3796	4135	4474	4813	5152
81	5491	5830	6169	6508	6847	7186	7525	7864	8203	8541
82	8880	9219	9558	9896	0̅235	0̅574	0̅912	1̅251	1̅590	1̅928
83	108 2267	2605	2944	3282	3620	3959	4297	4635	4974	5312
84	5650	5988	6327	6665	7003	7341	7679	8017	8355	8693
85	9031	9369	9707	0̅045	0̅383	0̅721	1̅059	1̅396	1̅734	2̅072
86	109 2410	2747	3085	3423	3760	4098	4435	4773	5111	5448
87	5785	6123	6460	6798	7135	7472	7810	8147	8484	8821
88	9159	9496	9833	0̅170	0̅507	0̅844	1̅181	1̅518	1̅855	2̅192
89	110 2529	2866	3203	3540	3877	4213	4550	4887	5224	5560
1290	5897	6234	6570	6907	7244	7580	7917	8253	8590	8926
91	9262	9599	9935	0̅272	0̅608	0̅944	1̅280	1̅617	1̅953	2̅289
92	111 2625	2961	3297	3633	3969	4306	4642	4977	5313	5649
93	5985	6321	6657	6993	7329	7664	8000	8336	8671	9007
94	9343	9678	0̅014	0̅350	0̅685	1̅021	1̅356	1̅691	2̅027	2̅362
95	112 2698	3033	3368	3704	4039	4374	4709	5045	5380	5715
96	6050	6385	6720	7055	7390	7725	8060	8395	8730	9065
97	9400	9735	0̅069	0̅404	0̅739	1̅074	1̅408	1̅743	2̅078	2̅412
98	113 2747	3081	3416	3751	4085	4420	4754	5088	5423	5757
99	6092	6426	6760	7094	7429	7763	8097	8431	8765	9099
1300	9434	9768	0̅102	0̅436	0̅770	1̅104	1̅437	1̅771	2̅105	2̅439
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	348	347
1	34.8	34.7
2	69.6	69.4
3	104.4	104.1
4	139.2	138.8
5	174.0	173.5
6	208.8	208.2
7	243.6	242.9
8	278.4	277.6
9	313.2	312.3

	346	345	344
1	34.6	34.5	34.4
2	69.2	69.0	58.8
3	103.8	103.5	103.2
4	138.4	138.0	137.6
5	173.0	172.5	172.0
6	207.6	207.0	206.4
7	242.2	241.5	240.8
8	276.8	276.0	275.2
9	311.4	310.5	309.6

	343	342
1	34.3	34.2
2	68.6	68.4
3	102.9	102.6
4	137.2	136.8
5	171.5	171.0
6	205.8	205.2
7	240.1	239.4
8	274.4	273.6
9	308.7	307.8

	341	340
1	34.1	34.0
2	68.2	68.0
3	102.3	102.0
4	136.4	136.0
5	170.5	170.0
6	204.6	204.0
7	238.7	238.0
8	272.8	272.0
9	306.9	306.0

	339	338	337
1	33.9	33.8	33.7
2	67.8	67.6	67.4
3	101.7	101.4	101.1
4	135.6	135.2	134.8
5	169.5	169.0	168.5
6	203.4	202.8	202.2
7	237.3	236.6	235.9
8	271.2	270.4	269.6
9	305.1	304.2	303.3

	336	335
1	33.6	33.5
2	67.2	67.0
3	100.8	100.5
4	134.4	134.0
5	168.0	167.5
6	201.6	201.0
7	235.2	234.5
8	268.8	268.0
9	302.4	301.5

	334	333
1	33.4	33.3
2	66.8	66.6
3	100.2	99.9
4	133.6	133.2
5	167.0	166.5
6	200.4	199.8
7	233.8	233.1
8	267.2	266.4
9	300.6	299.7

P. P.

12500″ = 3°28′20″ 1250′ = 0°20′50″ S. 4.685 5722 T. 5802
12600 = 3 30 0 1260 = 0 21 0 5722 5803
12700 = 3 31 40 1270 = 0 21 10 5721 5804
12800 = 3 33 20 1280 = 0 21 20 5721 5804
12900 = 3 35 0 1290 = 0 21 30 5720 5805

N.	0	1	2	3	4	5	6	7	8	9
1300	113 9434	9768	0̄102	0̄436	0̄770	1̄104	1̄437	1̄771	2̄105	2̄439
01	114 2773	3107	3441	3774	4108	4442	4775	5109	5443	5776
02	6110	6443	6777	7110	7444	7777	8111	8444	8777	9111
03	9444	9777	0̄111	0̄444	0̄777	1̄110	1̄444	1̄777	2̄110	2̄443
04	115 2776	3109	3442	3775	4108	4441	4774	5107	5439	5772
05	6105	6438	6771	7103	7436	7769	8101	8434	8767	9099
06	9432	9764	0̄097	0̄429	0̄762	1̄094	1̄427	1̄759	2̄091	2̄424
07	116 2756	3088	3420	3753	4085	4417	4749	5081	5413	5745
08	6077	6409	6741	7073	7405	7737	8069	8401	8733	9065
09	9396	9728	0̄060	0̄392	0̄723	1̄055	1̄387	1̄718	2̄050	2̄381
1310	117 2713	3044	3376	3707	4039	4370	4702	5033	5364	5696
11	6027	6358	6689	7021	7352	7683	8014	8345	8676	9007
12	9338	9669	0̄000	0̄331	0̄662	0̄993	1̄324	1̄655	1̄986	2̄316
13	118 2647	2978	3309	3639	3970	4301	4631	4962	5293	5623
14	5954	6284	6615	6945	7276	7606	7936	8267	8597	8927
15	9258	9588	9918	0̄248	0̄578	0̄909	1̄239	1̄569	1̄899	2̄229
16	119 2559	2889	3219	3549	3879	4209	4539	4868	5198	5528
17	5858	6187	6517	6847	7177	7506	7836	8165	8495	8825
18	9154	9484	9813	0̄143	0̄472	0̄801	1̄131	1̄460	1̄789	2̄119
19	120 2448	2777	3106	3436	3765	4094	4423	4752	5081	5410
1320	5739	6068	6397	6726	7055	7384	7713	8042	8371	8699
21	9028	9357	9686	0̄014	0̄343	0̄672	1̄000	1̄329	1̄657	1̄986
22	121 2315	2643	2972	3300	3628	3957	4285	4614	4942	5270
23	5598	5927	6255	6583	6911	7239	7568	7896	8224	8552
24	8880	9208	9536	9864	0̄192	0̄520	0̄848	1̄175	1̄503	1̄831
25	122 2159	2487	2814	3142	3470	3797	4125	4453	4780	5108
26	5435	5763	6090	6418	6745	7073	7400	7727	8055	8382
27	8709	9036	9364	9691	0̄018	0̄345	0̄672	1̄000	1̄327	1̄654
28	123 1981	2308	2635	2962	3289	3616	3942	4269	4596	4923
29	5250	5577	5903	6230	6557	6883	7210	7537	7863	8190
1330	8516	8843	9169	9496	9822	0̄149	0̄475	0̄802	1̄128	1̄454
31	124 1781	2107	2433	2759	3086	3412	3738	4064	4390	4716
32	5042	5368	5694	6020	6346	6672	6998	7324	7650	7976
33	8301	8627	8953	9279	9605	9930	0̄256	0̄582	0̄907	1̄233
34	125 1558	1884	2209	2535	2860	3186	3511	3837	4162	4487
35	4813	5138	5463	5788	6114	6439	6764	7089	7414	7739
36	8065	8390	8715	9040	9365	9690	0̄015	0̄339	0̄664	0̄989
37	126 1314	1639	1964	2288	2613	2938	3263	3587	3912	4237
38	4561	4886	5210	5535	5859	6184	6508	6833	7157	7481
39	7806	8130	8454	8779	9103	9427	9751	0̄076	0̄400	0̄724
1340	127 1048	1372	1696	2020	2344	2668	2992	3316	3640	3964
41	4288	4612	4935	5259	5583	5907	6230	6554	6878	7202
42	7525	7849	8172	8496	8819	9143	9466	9790	0̄113	0̄437
43	128 0760	1083	1407	1730	2053	2377	2700	3023	3346	3670
44	3993	4316	4639	4962	5285	5608	5931	6254	6577	6900
45	7223	7546	7869	8191	8514	8837	9160	9483	9805	0̄128
46	129 0451	0773	1096	1418	1741	2064	2386	2709	3031	3354
47	3676	3998	4321	4643	4965	5288	5610	5932	6255	6577
48	6899	7221	7543	7865	8187	8510	8832	9154	9476	9798
49	130 0119	0441	0763	1085	1407	1729	2051	2372	2694	3016
1350	3338	3659	3981	4303	4624	4946	5267	5589	5911	6232
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	334	333
1	33.4	33.3
2	66.8	66.6
3	100.2	99.9
4	133.6	133.2
5	167.0	166.5
6	200.4	199.8
7	233.8	233.1
8	267.2	266.4
9	300.6	299.7

	332	331
1	33.2	33.1
2	66.4	66.2
3	99.6	99.3
4	132.8	132.4
5	166.0	165.5
6	199.2	198.6
7	232.4	231.7
8	265.6	264.8
9	298.8	297.9

	330	329
1	33.0	32.9
2	66.0	65.8
3	99.0	98.7
4	132.0	131.6
5	165.0	164.5
6	198.0	197.4
7	231.0	230.3
8	264.0	263.2
9	297.0	296.1

	328	327
1	32.8	32.7
2	65.6	65.4
3	98.4	98.1
4	131.2	130.8
5	164.0	163.5
6	196.8	196.2
7	229.6	228.9
8	262.4	261.6
9	295.2	294.3

	326	325
1	32.6	32.5
2	65.2	65.0
3	97.8	97.5
4	130.4	130.0
5	163.0	162.5
6	195.6	195.0
7	228.2	227.5
8	260.8	260.0
9	293.4	292.5

	324	323
1	32.4	32.3
2	64.8	64.6
3	97.2	96.9
4	129.6	129.2
5	162.0	161.5
6	194.4	193.8
7	226.8	226.1
8	259.2	258.4
9	291.6	290.7

	322	321
1	32.2	32.1
2	64.4	64.2
3	96.6	96.3
4	128.8	128.4
5	161.0	160.5
6	193.2	192.6
7	225.4	224.7
8	257.6	256.8
9	289.8	288.9

P. P.

13000″ = 3° 36′ 40″	1300″ = 0° 21′ 40″	S. 4.685 5720	T. 5806
13100 = 3 38 20	1310 = 0 21 50	5719	5807
13200 = 3 40 0	1320 = 0 22 0	5719	5808
13300 = 3 41 40	1330 = 0 22 10	5719	5809
13400 = 3 43 20	1340 = 0 22 20	5718	5810

N.	0	1	2	3	4	5	6	7	8	9
1350	130 3338	3659	3981	4303	4624	4946	5267	5589	5911	6232
51	6553	6875	7196	7518	7839	8161	8482	8803	9124	9446
52	9767	0̄088	0̄409	0̄730	1̄052	1̄373	1̄694	2̄015	2̄336	2̄657
53	131 2978	3299	3620	3941	4262	4583	4903	5224	5545	5866
54	6187	6507	6828	7149	7469	7790	8111	8431	8752	9072
55	9393	9713	0̄034	0̄354	0̄675	0̄995	1̄316	1̄636	1̄956	2̄277
56	132 2597	2917	3237	3558	3878	4198	4518	4838	5158	5478
57	5798	6119	6439	6758	7078	7398	7718	8038	8358	8678
58	8998	9317	9637	9957	0̄277	0̄596	0̄916	1̄236	1̄555	1̄875
59	133 2195	2514	2834	3153	3473	3792	4112	4431	4750	5070
1360	5389	5708	6028	6347	6666	6985	7305	7624	7943	8262
61	8581	8900	9219	9538	9857	0̄176	0̄495	0̄814	1̄133	1̄452
62	134 1771	2090	2409	2728	3046	3365	3684	4003	4321	4640
63	4959	5277	5596	5914	6233	6551	6870	7188	7507	7825
64	8144	8462	8780	9099	9417	9735	0̄054	0̄372	0̄690	1̄008
65	135 1327	1645	1963	2281	2599	2917	3235	3553	3871	4189
66	4507	4825	5143	5461	5779	6096	6414	6732	7050	7367
67	7685	8003	8320	8638	8956	9273	9591	9908	0̄226	0̄543
68	136 0861	1178	1496	1813	2131	2448	2765	3083	3400	3717
69	4034	4352	4669	4986	5303	5620	5937	6255	6572	6889
1370	7206	7523	7840	8157	8473	8790	9107	9424	9741	0̄058
71	137 0375	0691	1008	1325	1641	1958	2275	2591	2908	3225
72	3541	3858	4174	4491	4807	5124	5440	5756	6073	6389
73	6705	7022	7338	7654	7970	8287	8603	8919	9235	9551
74	9867	0̄183	0̄499	0̄815	1̄131	1̄447	1̄763	2̄079	2̄395	2̄711
75	138 3027	3343	3659	3974	4290	4606	4922	5237	5553	5869
76	6184	6500	6816	7131	7447	7762	8078	8393	8709	9024
77	9339	9655	9970	0̄285	0̄601	0̄916	1̄231	1̄547	1̄862	2̄177
78	139 2492	2807	3122	3438	3753	4068	4383	4698	5013	5328
79	5643	5958	6272	6587	6902	7217	7532	7847	8161	8476
1380	8791	9106	9420	9735	0̄050	0̄364	0̄679	0̄993	1̄308	1̄622
81	140 1937	2251	2566	2880	3195	3509	3823	4138	4452	4766
82	5080	5395	5709	6023	6337	6651	6966	7280	7594	7908
83	8222	8536	8850	9164	9478	9792	0̄106	0̄419	0̄733	1̄047
84	141 1361	1675	1988	2302	2616	2930	3243	3557	3871	4184
85	4498	4811	5125	5438	5752	6065	6379	6692	7006	7319
86	7632	7946	8259	8572	8885	9199	9512	9825	0̄138	0̄451
87	142 0765	1078	1391	1704	2017	2330	2643	2956	3269	3582
88	3895	4208	4520	4833	5146	5459	5772	6084	6397	6710
89	7022	7335	7648	7960	8273	8586	8898	9211	9523	9836
1390	143 0148	0460	0773	1085	1398	1710	2022	2335	2647	2959
91	3271	3584	3896	4208	4520	4832	5144	5456	5768	6080
92	6392	6704	7016	7328	7640	7952	8264	8576	8888	9199
93	9511	9823	0̄135	0̄446	0̄758	1̄070	1̄381	1̄693	2̄005	2̄316
94	144 2628	2939	3251	3562	3874	4185	4497	4808	5119	5431
95	5742	6053	6365	6676	6987	7298	7610	7921	8232	8543
96	8854	9165	9476	9787	0̄098	0̄409	0̄720	1̄031	1̄342	1̄653
97	145 1964	2275	2586	2897	3207	3518	3829	4140	4450	4761
98	5072	5382	5693	6004	6314	6625	6935	7246	7556	7867
99	8177	8488	8798	9108	9419	9729	0̄039	0̄350	0̄660	0̄970
1400	146 1280	1591	1901	2211	2521	2831	3141	3451	3761	4071
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	322	321
1	32.2	32.1
2	64.4	64.2
3	96.6	96.3
4	128.8	128.4
5	161.0	160.5
6	193.2	192.6
7	225.4	224.7
8	257.6	256.8
9	289.8	288.9

	320	319
1	32.0	31.9
2	64.0	63.8
3	96.0	95.7
4	128.0	127.6
5	160.0	159.5
6	192.0	191.4
7	224.0	223.3
8	256.0	255.2
9	288.0	287.1

	318	317
1	31.8	31.7
2	63.6	63.4
3	95.4	95.1
4	127.2	126.8
5	159.0	158.5
6	190.8	190.2
7	222.6	221.9
8	254.4	253.6
9	286.2	285.3

	316	315
1	31.6	31.5
2	63.2	63.0
3	94.8	94.5
4	126.4	126.0
5	158.0	157.5
6	189.6	189.0
7	221.2	220.5
8	252.8	252.0
9	284.4	283.5

	314	313
1	31.4	31.3
2	62.8	62.6
3	94.2	93.9
4	125.6	125.2
5	157.0	156.5
6	188.4	187.8
7	219.8	219.1
8	251.2	250.4
9	282.6	281.7

	312	311
1	31.2	31.1
2	62.4	62.2
3	93.6	93.3
4	124.8	124.4
5	156.0	155.5
6	187.2	186.6
7	218.4	217.7
8	249.6	248.8
9	280.8	279.9

	310
1	31.0
2	62.0
3	93.0
4	124.0
5	155.0
6	186.0
7	217.0
8	248.0
9	279.0

P. P.

13500″ = 3°45′ 0″ 1350″ = 0°22′ 30″ S. 4.685 5718 T. 5811
13600 = 3 46 40 1360 = 0 22 40 5717 5812
13700 = 3 48 20 1370 = 0 22 50 5717 5813
13800 = 3 50 0 1380 = 0 23 0 5716 5813
13900 = 3 51 40 1390 = 0 23 10 5716 5814

N.	0	1	2	3	4	5	6	7	8	9
1400	146 1280	1591	1901	2211	2521	2831	3141	3451	3761	4071
01	4381	4691	5001	5311	5621	5931	6241	6551	6861	7170
02	7480	7790	8100	8409	8719	9029	9338	9648	9958	0̄267
03	147 0577	0886	1196	1505	1815	2124	2434	2743	3052	3362
04	3671	3980	4290	4599	4908	5217	5527	5836	6145	6454
05	6763	7072	7381	7690	7999	8308	8617	8926	9235	9544
06	9853	0̄162	0̄471	0̄780	1̄089	1̄397	1̄706	2̄015	2̄324	2̄632
07	148 2941	3250	3558	3867	4175	4484	4793	5101	5410	5718
08	6027	6335	6643	6952	7260	7569	7877	8185	8493	8802
09	9110	9418	9726	0̄035	0̄343	0̄651	0̄959	1̄267	1̄575	1̄883
1410	149 2191	2499	2807	3115	3423	3731	4039	4347	4655	4962
11	5270	5578	5886	6193	6501	6809	7116	7424	7732	8039
12	8347	8655	8962	9270	9577	9885	0̄192	0̄499	0̄807	1̄114
13	150 1422	1729	2036	2344	2651	2958	3265	3573	3880	4187
14	4494	4801	5108	5415	5722	6030	6337	6644	6951	7257
15	7564	7871	8178	8485	8792	9099	9406	9712	0̄019	0̄326
16	151 0633	0939	1246	1553	1859	2166	2472	2779	3085	3392
17	3699	4005	4311	4618	4924	5231	5537	5843	6150	6456
18	6762	7069	7375	7681	7987	8293	8600	8906	9212	9518
19	9824	0̄130	0̄436	0̄742	1̄048	1̄354	1̄660	1̄966	2̄272	2̄578
1420	152 2883	3189	3495	3801	4107	4412	4718	5024	5329	5635
21	5941	6246	6552	6858	7163	7469	7774	8080	8385	8691
22	8996	9301	9607	9912	0̄217	0̄523	0̄828	1̄133	1̄439	1̄744
23	153 2049	2354	2659	2964	3270	3575	3880	4185	4490	4795
24	5100	5405	5710	6015	6320	6625	6929	7234	7539	7844
25	8149	8453	8758	9063	9368	9672	9977	0̄281	0̄586	0̄891
26	154 1195	1500	1804	2109	2413	2718	3022	3327	3631	3935
27	4240	4544	4848	5153	5457	5761	6065	6370	6674	6978
28	7282	7586	7890	8194	8498	8802	9106	9410	9714	0̄018
29	155 0322	0626	0930	1234	1538	1842	2145	2449	2753	3057
1430	3360	3664	3968	4271	4575	4879	5182	5486	5789	6093
31	6396	6700	7003	7307	7610	7914	8217	8520	8824	9127
32	9430	9733	0̄037	0̄340	0̄643	0̄946	1̄249	1̄553	1̄856	2̄159
33	156 2462	2765	3068	3371	3674	3977	4280	4583	4886	5189
34	5492	5794	6097	6400	6703	7006	7308	7611	7914	8216
35	8519	8822	9124	9427	9729	0̄032	0̄334	0̄637	0̄939	1̄242
36	157 1544	1847	2149	2452	2754	3056	3359	3661	3963	4265
37	4568	4870	5172	5474	5776	6079	6381	6683	6985	7287
38	7589	7891	8193	8495	8797	9099	9401	9702	0̄004	0̄306
39	158 0608	0910	1212	1513	1815	2117	2418	2720	3022	3323
1440	3625	3927	4228	4530	4831	5133	5434	5736	6037	6338
41	6640	6941	7243	7544	7845	8146	8448	8749	9050	9351
42	9653	9954	0̄255	0̄556	0̄857	1̄158	1̄459	1̄760	2̄061	2̄362
43	159 2663	2964	3265	3566	3867	4168	4469	4770	5070	5371
44	5672	5973	6273	6574	6875	7175	7476	7777	8077	8378
45	8678	8979	9280	9580	9881	0̄181	0̄481	0̄782	1̄082	1̄383
46	160 1683	1983	2284	2584	2884	3184	3485	3785	4085	4385
47	4685	4985	5286	5586	5886	6186	6486	6786	7086	7386
48	7686	7986	8285	8585	8885	9185	9485	9785	0̄084	0̄384
49	161 0684	0984	1283	1583	1883	2182	2482	2781	3081	3380
1450	3680	3980	4279	4578	4878	5177	5477	5776	6075	6375
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	311	310	309	308	307	306	305	304	303	302	301	300	299
1	31.1	31.0	30.9	30.8	30.7	30.6	30.5	30.4	30.3	30.2	30.1	30.0	29.9
2	62.2	62.0	61.8	61.6	61.4	61.2	61.0	60.8	60.6	60.4	60.2	60.0	59.8
3	93.3	93.0	92.7	92.4	92.1	91.8	91.5	91.2	90.9	90.6	90.3	90.0	89.7
4	124.4	124.0	123.6	123.2	122.8	122.4	122.0	121.6	121.2	120.8	120.4	120.0	119.6
5	155.5	155.0	154.5	154.0	153.5	153.0	152.5	152.0	151.5	151.0	150.5	150.0	149.5
6	186.6	186.0	185.4	184.8	184.2	183.6	183.0	182.4	181.8	181.2	180.6	180.0	179.4
7	217.7	217.0	216.3	215.6	214.9	214.2	213.5	212.8	212.1	211.4	210.7	210.0	209.3
8	248.8	248.0	247.2	246.4	245.6	244.8	244.0	243.2	242.4	241.6	240.8	240.0	239.2
9	279.9	279.0	278.1	277.2	276.3	275.4	274.5	273.6	272.7	271.8	270.9	270.0	269.1

P. P.

14000″ = 3° 53′ 20″	1400″ = 0° 23′ 20″	S. 4.685 5715	T. 5815
14100 = 3 55 0	1410 = 0 23 30	5715	5816
14200 = 3 56 40	1420 = 0 23 40	5714	5817
14300 = 3 58 20	1430 = 0 23 50	5714	5818
14400 = 4 0 0	1440 = 0 24 0	5713	5819

N.	0	1	2	3	4	5	6	7	8	9
1450	161 3680	3980	4279	4578	4878	5177	5477	5776	6075	6375
51	6674	6973	7273	7572	7871	8170	8470	8769	9068	9367
52	9666	9965	0̅264	0̅563	0̅862	1̅161	1̅460	1̅759	2̅058	2̅357
53	162 2656	2955	3254	3553	3852	4150	4449	4748	5047	5345
54	5644	5943	6241	6540	6839	7137	7436	7734	8033	8331
55	8630	8928	9227	9525	9824	0̅122	0̅420	0̅719	1̅017	1̅315
56	163 1614	1912	2210	2508	2807	3105	3403	3701	3999	4297
57	4596	4894	5192	5490	5788	6086	6384	6682	6979	7277
58	7575	7873	8171	8469	8767	9064	9362	9660	9958	0̅255
59	164 0553	0851	1148	1446	1743	2041	2339	2636	2934	3231
1460	3529	3826	4123	4421	4718	5016	5313	5610	5908	6205
61	6502	6799	7097	7394	7691	7988	8285	8582	8880	9177
62	9474	9771	0̅068	0̅365	0̅662	0̅959	1̅256	1̅553	1̅850	2̅146
63	165 2443	2740	3037	3334	3631	3927	4224	4521	4817	5114
64	5411	5707	6004	6301	6597	6894	7190	7487	7783	8080
65	8376	8673	8969	9265	9562	9858	0̅155	0̅451	0̅747	1̅043
66	166 1340	1636	1932	2228	2525	2821	3117	3413	3709	4005
67	4301	4597	4893	5189	5485	5781	6077	6373	6669	6965
68	7261	7556	7852	8148	8444	8740	9035	9331	9627	9922
69	167 0218	0514	0809	1105	1400	1696	1991	2287	2582	2878
1470	3173	3469	3764	4060	4355	4650	4946	5241	5536	5831
71	6127	6422	6717	7012	7308	7603	7898	8193	8488	8783
72	9078	9373	9668	9963	0̅258	0̅553	0̅848	1̅143	1̅438	1̅733
73	168 2027	2322	2617	2912	3207	3501	3796	4091	4386	4680
74	4975	5269	5564	5859	6153	6448	6742	7037	7331	7626
75	7920	8215	8509	8803	9098	9392	9686	9981	0̅275	0̅569
76	169 0864	1158	1452	1746	2040	2335	2629	2923	3217	3511
77	3805	4099	4393	4687	4981	5275	5569	5863	6157	6450
78	6744	7038	7332	7626	7920	8213	8507	8801	9094	9388
79	9682	9975	0̅269	0̅563	0̅856	1̅150	1̅443	1̅737	2̅030	2̅324
1480	170 2617	2911	3204	3497	3791	4084	4377	4671	4964	5257
81	5551	5844	6137	6430	6723	7017	7310	7603	7896	8189
82	8482	8775	9068	9361	9654	9947	0̅240	0̅533	0̅826	1̅119
83	171 1412	1704	1997	2290	2583	2876	3168	3461	3754	4046
84	4339	4632	4924	5217	5509	5802	6095	6387	6680	6972
85	7265	7557	7849	8142	8434	8727	9019	9311	9604	9896
86	172 0188	0480	0773	1065	1357	1649	1941	2233	2526	2818
87	3110	3402	3694	3986	4278	4570	4862	5154	5446	5737
88	6029	6321	6613	6905	7197	7488	7780	8072	8364	8655
89	8947	9239	9530	9822	0̅113	0̅405	0̅697	0̅988	1̅280	1̅571
1490	173 1863	2154	2446	2737	3028	3320	3611	3903	4194	4485
91	4776	5068	5359	5650	5941	6233	6524	6815	7106	7397
92	7688	7979	8270	8561	8852	9143	9434	9725	0̅016	0̅307
93	174 0598	0889	1180	1471	1761	2052	2343	2634	2925	3215
94	3506	3797	4087	4378	4669	4959	5250	5540	5831	6121
95	6412	6702	6993	7283	7574	7864	8155	8445	8735	9026
96	9316	9606	9897	0̅187	0̅477	0̅767	1̅057	1̅348	1̅638	1̅928
97	175 2218	2508	2798	3088	3378	3668	3958	4248	4538	4828
98	5118	5408	5698	5988	6278	6567	6857	7147	7437	7727
99	8016	8306	8596	8885	9175	9465	9754	0̅044	0̅333	0̅623
1500	176 0913	1202	1492	1781	2071	2360	2649	2939	3228	3518

P. P.

	300	299
1	30.0	29.9
2	60.0	59.8
3	90.0	89.7
4	120.0	119.6
5	150.0	149.5
6	180.0	179.4
7	210.0	209.3
8	240.0	239.2
9	270.0	269.1

	298	297
1	29.8	29.7
2	59.6	59.4
3	89.4	89.1
4	119.2	118.8
5	149.0	148.5
6	178.8	178.2
7	208.6	207.9
8	238.4	237.6
9	268.2	267.3

	296	295
1	29.6	29.5
2	59.2	59.0
3	88.8	88.5
4	118.4	118.0
5	148.0	147.5
6	177.6	177.0
7	207.2	206.5
8	236.8	236.0
9	266.4	265.5

	294	293
1	29.4	29.3
2	58.8	58.6
3	88.2	87.9
4	117.6	117.2
5	147.0	146.5
6	176.4	175.8
7	205.8	205.1
8	235.2	234.4
9	264.6	263.7

	292	291
1	29.2	29.1
2	58.4	58.2
3	87.6	87.3
4	116.8	116.4
5	146.0	145.5
6	175.2	174.6
7	204.4	203.7
8	233.6	232.8
9	262.8	261.9

	290	289
1	29.0	28.9
2	58.0	57.8
3	87.0	86.7
4	116.0	115.6
5	145.0	144.5
6	174.0	173.4
7	203.0	202.3
8	232.0	231.2
9	261.0	260.1

14500″ = 4° 1′ 40″ 1450″ = 0° 24′ 10″ S. 4.685 5713 T. 5820
14600 = 4 3 20 1460 = 0 24 20 5712 5821
14700 = 4 5 0 1470 = 0 24 30 5712 5822
14800 = 4 6 40 1480 = 0 24 40 5711 5823
14900 = 4 8 20 1490 = 0 24 50 5711 5824

N.	0	1	2	3	4	5	6	7	8	9
1500	176 0913	1202	1492	1781	2071	2360	2649	2939	3228	3518
01	3807	4096	4386	4675	4964	5253	5543	5832	6121	6410
02	6699	6988	7278	7567	7856	8145	8434	8723	9012	9301
03	9590	9879	0̄168	0̄457	0̄745	1̄034	1̄323	1̄612	1̄901	2̄190
04	177 2478	2767	3056	3345	3633	3922	4211	4499	4788	5076
05	5365	5654	5942	6231	6519	6808	7096	7385	7673	7961
06	8250	8538	8826	9115	9403	9691	9980	0̄268	0̄556	0̄844
07	178 1133	1421	1709	1997	2285	2573	2861	3149	3437	3725
08	4013	4301	4589	4877	5165	5453	5741	6029	6317	6605
09	6892	7180	7468	7756	8043	8331	8619	8907	9194	9482
1510	9769	0̄057	0̄345	0̄632	0̄920	1̄207	1̄495	1̄782	2̄070	2̄357
11	179 2645	2932	3219	3507	3794	4082	4369	4656	4943	5231
12	5518	5805	6092	6380	6667	6954	7241	7528	7815	8102
13	8389	8676	8963	9250	9537	9824	0̄111	0̄398	0̄685	0̄972
14	180 1259	1546	1832	2119	2406	2693	2980	3266	3553	3840
15	4126	4413	4700	4986	5273	5559	5846	6133	6419	6706
16	6992	7278	7565	7851	8138	8424	8711	8997	9283	9570
17	9856	0̄142	0̄428	0̄715	1̄001	1̄287	1̄573	1̄859	2̄145	2̄432
18	181 2718	3004	3290	3576	3862	4148	4434	4720	5006	5292
19	5578	5864	6150	6435	6721	7007	7293	7579	7864	8150
1520	8436	8722	9007	9293	9579	9864	0̄150	0̄435	0̄721	1̄007
21	182 1292	1578	1863	2149	2434	2720	3005	3290	3576	3861
22	4147	4432	4717	5002	5288	5573	5858	6143	6429	6714
23	6999	7284	7569	7854	8140	8425	8710	8995	9280	9565
24	9850	0̄135	0̄420	0̄704	0̄989	1̄274	1̄559	1̄844	2̄129	2̄414
25	183 2698	2983	3268	3553	3837	4122	4407	4691	4976	5261
26	5545	5830	6114	6399	6684	6968	7253	7537	7822	8106
27	8390	8675	8959	9244	9528	9812	0̄096	0̄381	0̄665	0̄949
28	184 1234	1518	1802	2086	2370	2654	2939	3223	3507	3791
29	4075	4359	4643	4927	5211	5495	5779	6063	6347	6630
1530	6914	7198	7482	7766	8050	8333	8617	8901	9185	9468
31	9752	0̄036	0̄319	0̄603	0̄886	1̄170	1̄454	1̄737	2̄021	2̄304
32	185 2588	2871	3155	3438	3721	4005	4288	4572	4855	5138
33	5422	5705	5988	6271	6555	6838	7121	7404	7687	7970
34	8254	8537	8820	9103	9386	9669	9952	0̄235	0̄518	0̄801
35	186 1084	1367	1650	1932	2215	2498	2781	3064	3347	3629
36	3912	4195	4478	4760	5043	5326	5608	5891	6174	6456
37	6739	7021	7304	7586	7869	8151	8434	8716	8999	9281
38	9563	9846	0̄128	0̄410	0̄693	0̄975	1̄257	1̄540	1̄822	2̄104
39	187 2386	2668	2951	3233	3515	3797	4079	4361	4643	4925
1540	5207	5489	5771	6053	6335	6617	6899	7181	7463	7745
41	8026	8308	8590	8872	9154	9435	9717	9999	0̄280	0̄562
42	188 0844	1125	1407	1689	1970	2252	2533	2815	3096	3378
43	3659	3941	4222	4504	4785	5066	5348	5629	5910	6192
44	6473	6754	7035	7317	7598	7879	8160	8441	8723	9004
45	9285	9566	9847	0̄128	0̄409	0̄690	0̄971	1̄252	1̄533	1̄814
46	189 2095	2376	2657	2938	3218	3499	3780	4061	4342	4622
47	4903	5184	5465	5745	6026	6307	6587	6868	7148	7429
48	7710	7990	8271	8551	8832	9112	9393	9673	9953	0̄234
49	190 0514	0795	1075	1355	1636	1916	2196	2476	2757	3037
1550	3317	3597	3877	4157	4438	4718	4998	5278	5558	5838
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	290	289	288	287	286	285	284	283	282	281	280
1	29.0	28.9	28.8	28.7	28.6	28.5	28.4	28.3	28.2	28.1	28.0
2	58.0	57.8	57.6	57.4	57.2	57.0	56.8	56.6	56.4	56.2	56.0
3	87.0	86.7	86.4	86.1	85.8	85.5	85.2	84.9	84.6	84.3	84.0
4	116.0	115.6	115.2	114.8	114.4	114.0	113.6	113.2	112.8	112.4	112.0
5	145.0	144.5	144.0	143.5	143.0	142.5	142.0	141.5	141.0	140.5	140.0
6	174.0	173.4	172.8	172.2	171.6	171.0	170.4	169.8	169.2	168.6	168.0
7	203.0	202.3	201.6	200.9	200.2	199.5	198.8	198.1	197.4	196.7	196.0
8	232.0	231.2	230.4	229.6	228.8	228.0	227.2	226.4	225.6	224.8	224.0
9	261.0	260.1	259.2	258.3	257.4	256.5	255.6	254.7	253.8	252.9	252.0

15000″ = 4° 10′ 0″	1500″ = 0° 25′ 0″	S. 4.685 5710	T. 5825
15100 = 4 11 40	1510 = 0 25 10	5710	5826
15200 = 4 13 20	1520 = 0 25 20	5709	5827
15300 = 4 15 0	1530 = 0 25 30	5709	5828
15400 = 4 16 40	1540 = 0 25 40	5708	5829

0	1	2	3	4	5	6	7	8	9
190 3317	3597	3877	4157	4438	4718	4998	5278	5558	5838
6118	6398	6678	6958	7238	7518	7798	8078	8357	8637
8917	9197	9477	9757	0̅036	0̅316	0̅596	0̅876	1̅155	1̅435
191 1715	1994	2274	2553	2833	3113	3392	3672	3951	4231
4510	4790	5069	5348	5628	5907	6187	6466	6745	7025
7304	7583	7862	8142	8421	8700	8979	9259	9538	9817
192 0096	0375	0654	0933	1212	1491	1770	2049	2328	2607
2886	3165	3444	3723	4002	4281	4559	4838	5117	5396
5675	5953	6232	6511	6789	7068	7347	7625	7904	8183
8461	8740	9018	9297	9575	9854	0̅132	0̅411	0̅689	0̅968
193 1246	1524	1803	2081	2359	2638	2916	3194	3473	3751
4029	4307	4585	4864	5142	5420	5698	5976	6254	6532
6810	7088	7366	7644	7922	8200	8478	8756	9034	9312
9590	9868	0̅145	0̅423	0̅701	0̅979	1̅257	1̅534	1̅812	2̅090
194 2367	2645	2923	3200	3478	3756	4033	4311	4588	4866
5143	5421	5698	5976	6253	6531	6808	7086	7363	7640
7918	8195	8472	8749	9027	9304	9581	9858	0̅136	0̅413
195 0690	0967	1244	1521	1798	2075	2353	2630	2907	3184
3461	3738	4014	4291	4568	4845	5122	5399	5676	5953
6229	6506	6783	7060	7336	7613	7890	8167	8443	8720
8997	9273	9550	9826	0̅103	0̅379	0̅656	0̅932	1̅209	1̅485
196 1762	2038	2315	2591	2867	3144	3420	3697	3973	4249
4525	4802	5078	5354	5630	5907	6183	6459	6735	7011
7287	7563	7839	8115	8391	8667	8943	9219	9495	9771
197 0047	0323	0599	0875	1151	1427	1702	1978	2254	2530
2806	3081	3357	3633	3908	4184	4460	4735	5011	5287
5562	5838	6113	6389	6664	6940	7215	7491	7766	8042
8317	8592	8868	9143	9418	9694	9969	0̅244	0̅520	0̅795
198 1070	1345	1620	1896	2171	2446	2721	2996	3271	3546
3821	4096	4371	4646	4921	5196	5471	5746	6021	6296
6571	6846	7121	7395	7670	7945	8220	8495	8769	9044
9319	9593	9868	0̅143	0̅417	0̅692	0̅967	1̅241	1̅516	1̅790
199 2065	2339	2614	2888	3163	3437	3712	3986	4260	4535
4809	5083	5358	5632	5906	6181	6455	6729	7003	7278
7552	7826	8100	8374	8648	8922	9197	9471	9745	0̅019
200 0293	0567	0841	1115	1389	1662	1936	2210	2484	2758
3032	3306	3579	3853	4127	4401	4674	4948	5222	5496
5769	6043	6317	6590	6864	7137	7411	7684	7958	8231
8505	8778	9052	9325	9599	9872	0̅146	0̅419	0̅692	0̅966
201 1239	1512	1786	2059	2332	2605	2879	3152	3425	3698
3971	4244	4517	4791	5064	5337	5610	5883	6156	6429
6702	6975	7248	7521	7794	8066	8339	8612	8885	9158
9431	9703	9976	0̅249	0̅522	0̅794	1̅067	1̅340	1̅612	1̅885
202 2158	2430	2703	2976	3248	3521	3793	4066	4338	4611
4883	5156	5428	5700	5973	6245	6518	6790	7062	7335
7607	7879	8151	8424	8696	8968	9240	9512	9785	0̅057
203 0329	0601	0873	1145	1417	1689	1961	2233	2505	2777
3049	3321	3593	3865	4137	4409	4681	4952	5224	5496
5768	6040	6311	6583	6855	7126	7398	7670	7941	8213
8485	8756	9028	9299	9571	9842	0̅114	0̅385	0̅657	0̅928
204 1200	1471	1743	2014	2285	2557	2828	3099	3371	3642
0	1	2	3	4	5	6	7	8	9

P. P.

	281	280	279	278	277	276	275	274	273	272	271
1	28.1	28.0	27.9	27.8	27.7	27.6	27.5	27.4	27.3	27.2	27.1
2	56.2	56.0	55.8	55.6	55.4	55.2	55.0	54.8	54.6	54.4	54.2
3	84.3	84.0	83.7	83.4	83.1	82.8	82.5	82.2	81.9	81.6	81.3
4	112.4	112.0	111.6	111.2	110.8	110.4	110.0	109.6	109.2	108.8	108.4
5	140.5	140.0	139.5	139.0	138.5	138.0	137.5	137.0	136.5	136.0	135.5
6	168.6	168.0	167.4	166.8	166.2	165.6	165.0	164.4	163.8	163.2	162.6
7	196.7	196.0	195.3	194.6	193.9	193.2	192.5	191.8	191.1	190.4	189.7
8	224.8	224.0	223.2	222.4	221.6	220.8	220.0	219.2	218.4	217.6	216.8
9	252.9	252.0	251.1	250.2	249.3	248.4	247.5	246.6	245.7	244.8	243.9

P. P.

15500″ = 4° 18′ 20″ 1550″ = 0° 25′ 50″ S. 4.685 5708 T. 5830
15600 = 4 20 0 1560 = 0 26 0 5707 5831
15700 = 4 21 40 1570 = 0 26 10 5707 5833
15800 = 4 23 20 1580 = 0 26 20 5706 5834
15900 = 4 25 0 1590 = 0 26 30 5706 5835

N.	0	1	2	3	4	5	6	7	8	9
1600	204 1200	1471	1743	2014	2285	2557	2828	3099	3371	3642
01	3913	4185	4456	4727	4998	5269	5541	5812	6083	6354
02	6625	6896	7167	7438	7709	7980	8251	8522	8793	9064
03	9335	9606	9877	0̄148	0̄419	0̄690	0̄960	1̄231	1̄502	1̄773
04	205 2044	2314	2585	2856	3127	3397	3668	3939	4209	4480
05	4750	5021	5292	5562	5833	6103	6374	6644	6915	7185
06	7455	7726	7996	8267	8537	8807	9078	9348	9618	9889
07	206 0159	0429	0699	0969	1240	1510	1780	2050	2320	2590
08	2860	3131	3401	3671	3941	4211	4481	4751	5021	5291
09	5560	5830	6100	6370	6640	6910	7180	7449	7719	7989
1610	8259	8529	8798	9068	9338	9607	9877	0̄147	0̄416	0̄686
11	207 0955	1225	1495	1764	2034	2303	2573	2842	3112	3381
12	3650	3920	4189	4459	4728	4997	5267	5536	5805	6074
13	6344	6613	6882	7151	7421	7690	7959	8228	8497	8766
14	9035	9304	9573	9842	0̄111	0̄380	0̄649	0̄918	1̄187	1̄456
15	208 1725	1994	2263	2532	2801	3070	3338	3607	3876	4145
16	4414	4682	4951	5220	5488	5757	6026	6294	6563	6832
17	7100	7369	7637	7906	8174	8443	8711	8980	9248	9517
18	9785	0̄054	0̄322	0̄590	0̄859	1̄127	1̄395	1̄664	1̄932	2̄200
19	209 2468	2737	3005	3273	3541	3810	4078	4346	4614	4882
1620	5150	5418	5686	5954	6222	6490	6758	7026	7294	7562
21	7830	8098	8366	8634	8902	9170	9437	9705	9973	0̄241
22	210 0508	0776	1044	1312	1579	1847	2115	2382	2650	2918
23	3185	3453	3720	3988	4255	4523	4790	5058	5325	5593
24	5860	6128	6395	6662	6930	7197	7464	7732	7999	8266
25	8534	8801	9068	9335	9603	9870	0̄137	0̄404	0̄671	0̄938
26	211 1205	1472	1740	2007	2274	2541	2808	3075	3342	3609
27	3876	4142	4409	4676	4943	5210	5477	5744	6010	6277
28	6544	6811	7078	7344	7611	7878	8144	8411	8678	8944
29	9211	9477	9744	0̄011	0̄277	0̄544	0̄810	1̄077	1̄343	1̄610
1630	212 1876	2142	2409	2675	2942	3208	3474	3741	4007	4273
31	4540	4806	5072	5338	5605	5871	6137	6403	6669	6935
32	7202	7468	7734	8000	8266	8532	8798	9064	9330	9596
33	9862	0̄128	0̄394	0̄660	0̄926	1̄191	1̄457	1̄723	1̄989	2̄255
34	213 2521	2786	3052	3318	3584	3849	4115	4381	4646	4912
35	5178	5443	5709	5974	6240	6505	6771	7037	7302	7568
36	7833	8098	8364	8629	8895	9160	9425	9691	9956	0̄221
37	214 0487	0752	1017	1283	1548	1813	2078	2343	2609	2874
38	3139	3404	3669	3934	4199	4464	4730	4995	5260	5525
39	5790	6055	6319	6584	6849	7114	7379	7644	7909	8174
1640	8438	8703	8968	9233	9498	9762	0̄027	0̄292	0̄556	0̄821
41	215 1086	1350	1615	1880	2144	2409	2673	2938	3203	3467
42	3732	3996	4260	4525	4789	5054	5318	5583	5847	6111
43	6376	6640	6904	7169	7433	7697	7961	8226	8490	8754
44	9018	9282	9546	9811	0̄075	0̄339	0̄603	0̄867	1̄131	1̄395
45	216 1659	1923	2187	2451	2715	2979	3243	3507	3771	4034
46	4298	4562	4826	5090	5354	5617	5881	6145	6409	6672
47	6936	7200	7463	7727	7991	8254	8518	8781	9045	9309
48	9572	9836	0̄099	0̄363	0̄626	0̄890	1̄153	1̄416	1̄680	1̄943
49	217 2207	2470	2733	2997	3260	3523	3786	4050	4313	4576
1650	4839	5103	5366	5629	5892	6155	6418	6682	6945	7208
N.	0	1	2	3	4	5	6	7	8	9

P.	272	270	268	266	264
1	27.2	27.0	26.8	26.6	26.4
2	54.4	54.0	53.6	53.2	52.8
3	81.6	81.0	80.4	79.8	79.2
4	108.8	108.0	107.2	106.4	105.6
5	136.0	135.0	134.0	133.0	132.0
6	163.2	162.0	160.8	159.6	158.4
7	190.4	189.0	187.6	186.2	184.8
8	217.6	216.0	214.4	212.8	211.2
9	244.8	243.0	241.2	239.4	237.6

16000″ = 4°26′40″ 1600″ = 0°26′40″ S. 4.685 5705 T. 5836
16100 = 4 28 20 1610 = 0 26 50 5705 5837
16200 = 4 30 0 1620 = 0 27 0 5704 5838
16300 = 4 31 40 1630 = 0 27 10 5703 5839
16400 = 4 33 20 1640 = 0 27 20 5703 5840

N.	0	1	2	3	4	5	6	7	8	9
1650	217 4839	5103	5366	5629	5892	6155	6418	6682	6945	7208
51	7471	7734	7997	8260	8523	8786	9049	9312	9575	9838
52	218 0100	0363	0626	0889	1152	1415	1677	1940	2203	2466
53	2729	2991	3254	3517	3779	4042	4305	4567	4830	5092
54	5355	5618	5880	6143	6405	6668	6930	7193	7455	7718
55	7980	8242	8505	8767	9030	9292	9554	9816	0̄079	0̄341
56	219 0603	0866	1128	1390	1652	1914	2177	2439	2701	2963
57	3225	3487	3749	4011	4273	4535	4797	5059	5321	5583
58	5845	6107	6369	6631	6893	7155	7417	7678	7940	8202
59	8464	8726	8987	9249	9511	9773	0̄034	0̄296	0̄558	0̄819
1660	220 1081	1342	1604	1866	2127	2389	2650	2912	3173	3435
61	3696	3958	4219	4481	4742	5003	5265	5526	5788	6049
62	6310	6571	6833	7094	7355	7617	7878	8139	8400	8661
63	8922	9184	9445	9706	9967	0̄228	0̄489	0̄750	1̄011	1̄272
64	221 1533	1794	2055	2316	2577	2838	3099	3360	3621	3882
65	4142	4403	4664	4925	5186	5446	5707	5968	6229	6489
66	6750	7011	7271	7532	7793	8053	8314	8574	8835	9095
67	9356	9617	9877	0̄138	0̄398	0̄658	0̄919	1̄179	1̄440	1̄700
68	222 1960	2221	2481	2741	3002	3262	3522	3783	4043	4303
69	4563	4824	5084	5344	5604	5864	6124	6384	6645	6905
1670	7165	7425	7685	7945	8205	8465	8725	8985	9245	9505
71	9764	0̄024	0̄284	0̄544	0̄804	1̄064	1̄324	1̄583	1̄843	2̄103
72	223 2363	2622	2882	3142	3402	3661	3921	4181	4440	4700
73	4959	5219	5479	5738	5998	6257	6517	6776	7036	7295
74	7555	7814	8073	8333	8592	8852	9111	9370	9630	9889
75	224 0148	0407	0667	0926	1185	1444	1704	1963	2222	2481
76	2740	2999	3258	3517	3777	4036	4295	4554	4813	5072
77	5331	5590	5849	6107	6366	6625	6884	7143	7402	7661
78	7920	8178	8437	8696	8955	9213	9472	9731	9990	0̄248
79	225 0507	0766	1024	1283	1541	1800	2059	2317	2576	2834
1680	3093	3351	3610	3868	4127	4385	4644	4902	5160	5419
81	5677	5935	6194	6452	6710	6969	7227	7485	7743	8002
82	8260	8518	8776	9034	9293	9551	9809	0̄067	0̄325	0̄583
83	226 0841	1099	1357	1615	1873	2131	2389	2647	2905	3163
84	3421	3679	3937	4194	4452	4710	4968	5226	5484	5741
85	5999	6257	6515	6772	7030	7288	7545	7803	8060	8318
86	8576	8833	9091	9348	9606	9863	0̄121	0̄378	0̄636	0̄893
87	227 1151	1408	1666	1923	2180	2438	2695	2953	3210	3467
88	3724	3982	4239	4496	4753	5011	5268	5525	5782	6039
89	6296	6554	6811	7068	7325	7582	7839	8096	8353	8610
1690	8867	9124	9381	9638	9895	0̄152	0̄409	0̄666	0̄922	1̄179
91	228 1436	1693	1950	2206	2463	2720	2977	3233	3490	3747
92	4004	4260	4517	4774	5030	5287	5543	5800	6057	6313
93	6570	6826	7083	7339	7596	7852	8108	8365	8621	8878
94	9134	9390	9647	9903	0̄159	0̄416	0̄672	0̄928	1̄185	1̄441
95	229 1697	1953	2209	2466	2722	2978	3234	3490	3746	4002
96	4258	4515	4771	5027	5283	5539	5795	6051	6307	6562
97	6818	7074	7330	7586	7842	8098	8354	8609	8865	9121
98	9377	9633	9888	0̄144	0̄400	0̄656	0̄911	1̄167	1̄423	1̄678
99	230 1934	2189	2445	2701	2956	3212	3467	3723	3978	4234
1700	4489	4745	5000	5256	5511	5766	6022	6277	6532	6788
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	264	263
1	26.4	26.3
2	52.8	52.6
3	79.2	78.9
4	105.6	105.2
5	132.0	131.5
6	158.4	157.8
7	184.8	184.1
8	211.2	210.4
9	237.6	236.7

	262	261
1	26.2	26.1
2	52.4	52.2
3	78.6	78.3
4	104.8	104.4
5	131.0	130.5
6	157.2	156.6
7	183.4	182.7
8	209.6	208.8
9	235.8	234.9

	260	259
1	26.0	25.9
2	52.0	51.8
3	78.0	77.7
4	104.0	103.6
5	130.0	129.5
6	156.0	155.4
7	182.0	181.3
8	208.0	207.2
9	234.0	233.1

	258	257
1	25.8	25.7
2	51.6	51.4
3	77.4	77.1
4	103.2	102.8
5	129.0	128.5
6	154.8	154.2
7	180.6	179.9
8	206.4	205.6
9	232.2	231.3

	256	255
1	25.6	25.5
2	51.2	51.0
3	76.8	76.5
4	102.4	102.0
5	128.0	127.5
6	153.6	153.0
7	179.2	178.5
8	204.8	204.0
9	230.4	229.5

		S.	T.
16500″ = 4° 35′ 0″	1650″ = 0° 27′ 30″	4.685 5702	5841
16600 = 4 36 40	1660 = 0 27 40	5702	5842
16700 = 4 38 20	1670 = 0 27 50	5701	5844
16800 = 4 40 0	1680 = 0 28 0	5701	5845
16900 = 4 41 40	1690 = 0 28 10	5700	5846

N.	0	1	2	3	4	5	6	7	8	9
1700	230 4489	4745	5000	5256	5511	5766	6022	6277	6532	6788
01	7043	7298	7554	7809	8064	8320	8575	8830	9085	9340
02	9596	9851	0̅106	0̅361	0̅616	0̅871	1̅126	1̅381	1̅636	1̅891
03	231 2146	2401	2656	2911	3166	3421	3676	3931	4186	4441
04	4696	4951	5206	5460	5715	5970	6225	6480	6734	6989
05	7244	7499	7753	8008	8263	8517	8772	9026	9281	9536
06	9790	0̅045	0̅299	0̅554	0̅808	1̅063	1̅317	1̅572	1̅826	2̅081
07	232 2335	2590	2844	3098	3353	3607	3861	4116	4370	4624
08	4879	5133	5387	5641	5896	6150	6404	6658	6912	7166
09	7421	7675	7929	8183	8437	8691	8945	9199	9453	9707
1710	9961	0̅215	0̅469	0̅723	0̅977	1̅231	1̅485	1̅739	1̅992	2̅246
11	233 2500	2754	3008	3262	3515	3769	4023	4277	4530	4784
12	5038	5291	5545	5799	6052	6306	6559	6813	7067	7320
13	7574	7827	8081	8334	8588	8841	9095	9348	9601	9855
14	234 0108	0362	0615	0868	1122	1375	1628	1881	2135	2388
15	2641	2894	3148	3401	3654	3907	4160	4414	4667	4920
16	5173	5426	5679	5932	6185	6438	6691	6944	7197	7450
17	7703	7956	8209	8462	8715	8967	9220	9473	9726	9979
18	235 0232	0484	0737	0990	1243	1495	1748	2001	2253	2506
19	2759	3011	3264	3517	3769	4022	4274	4527	4779	5032
1720	5284	5537	5789	6042	6294	6547	6799	7052	7304	7556
21	7809	8061	8313	8566	8818	9070	9323	9575	9827	0̅079
22	236 0331	0584	0836	1088	1340	1592	1844	2097	2349	2601
23	2853	3105	3357	3609	3861	4113	4365	4617	4869	5121
24	5373	5625	5876	6128	6380	6632	6884	7136	7387	7639
25	7891	8143	8394	8646	8898	9150	9401	9653	9905	0̅156
26	237 0408	0660	0911	1163	1414	1666	1917	2169	2420	2672
27	2923	3175	3426	3678	3929	4181	4432	4683	4935	5186
28	5437	5689	5940	6191	6443	6694	6945	7196	7448	7699
29	7950	8201	8452	8703	8955	9206	9457	9708	9959	0̅210
1730	238 0461	0712	0963	1214	1465	1716	1967	2218	2469	2720
31	2971	3222	3472	3723	3974	4225	4476	4727	4977	5228
32	5479	5730	5980	6231	6482	6732	6983	7234	7484	7735
33	7986	8236	8487	8737	8988	9238	9489	9739	9990	0̅240
34	239 0491	0741	0992	1242	1493	1743	1993	2244	2494	2744
35	2995	3245	3495	3746	3996	4246	4496	4747	4997	5247
36	5497	5747	5998	6248	6498	6748	6998	7248	7498	7748
37	7998	8248	8498	8748	8998	9248	9498	9748	9998	0̅248
38	240 0498	0748	0997	1247	1497	1747	1997	2247	2496	2746
39	2996	3246	3495	3745	3995	4244	4494	4744	4993	5243
1740	5492	5742	5992	6241	6491	6740	6990	7239	7489	7738
41	7988	8237	8487	8736	8985	9235	9484	9734	9983	0̅232
42	241 0482	0731	0980	1229	1479	1728	1977	2226	2476	2725
43	2974	3223	3472	3721	3970	4220	4469	4718	4967	5216
44	5465	5714	5963	6212	6461	6710	6959	7208	7457	7705
45	7954	8203	8452	8701	8950	9199	9447	9696	9945	0̅194
46	242 0442	0691	0940	1189	1437	1686	1935	2183	2432	2680
47	2929	3178	3426	3675	3923	4172	4420	4669	4917	5166
48	5414	5663	5911	6160	6408	6656	6905	7153	7401	7650
49	7898	8146	8395	8643	8891	9139	9388	9636	9884	0̅132
1750	243 0380	0629	0877	1125	1373	1621	1869	2117	2365	2613
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	256	255
1	25.6	25.5
2	51.2	51.0
3	76.8	76.5
4	102.4	102.0
5	128.0	127.5
6	153.6	153.0
7	179.2	178.5
8	204.8	204.0
9	230.4	229.5

	254	253
1	25.4	25.3
2	50.8	50.6
3	76.2	75.9
4	101.6	101.2
5	127.0	126.5
6	152.4	151.8
7	177.8	177.1
8	203.2	202.4
9	228.6	227.7

	252	251
1	25.2	25.1
2	50.4	50.2
3	75.6	75.3
4	100.8	100.4
5	126.0	125.5
6	151.2	150.6
7	176.4	175.7
8	201.6	200.8
9	226.8	225.9

	250	249
1	25.0	24.9
2	50.0	49.8
3	75.0	74.7
4	100.0	99.6
5	125.0	124.5
6	150.0	149.4
7	175.0	174.3
8	200.0	199.2
9	225.0	224.1

	248
1	24.8
2	49.6
3	74.4
4	99.2
5	124.0
6	148.8
7	173.6
8	198.4
9	223.2

P. P.

17000″ = 4° 43′ 20″ 1700″ = 0° 28′ 20″ S. 4.685 5700 T. 5847
17100 = 4 45 0 1710 = 0 28 30 5699 5848
17200 = 4 46 40 1720 = 0 28 40 5698 5849
17300 = 4 48 20 1730 = 0 28 50 5698 5851
17400 = 4 50 0 1740 = 0 29 0 5697 5852

N.	0	1	2	3	4	5	6	7	8	9
1750	243 0380	0629	0877	1125	1373	1621	1869	2117	2365	2613
51	2861	3109	3357	3605	3853	4101	4349	4597	4845	5093
52	5341	5589	5837	6085	6332	6580	6828	7076	7324	7571
53	7819	8067	8315	8562	8810	9058	9305	9553	9801	0̄048
54	244 0296	0543	0791	1039	1286	1534	1781	2029	2276	2524
55	2771	3019	3266	3514	3761	4008	4256	4503	4750	4998
56	5245	5492	5740	5987	6234	6482	6729	6976	7223	7470
57	7718	7965	8212	8459	8706	8953	9200	9448	9695	9942
58	245 0189	0436	0683	0930	1177	1424	1671	1918	2165	2411
59	2658	2905	3152	3399	3646	3893	4140	4386	4633	4880
1760	5127	5373	5620	5867	6114	6360	6607	6854	7100	7347
61	7594	7840	8087	8333	8580	8826	9073	9320	9566	9813
62	246 0059	0306	0552	0798	1045	1291	1538	1784	2030	2277
63	2523	2769	3016	3262	3508	3755	4001	4247	4493	4740
64	4986	5232	5478	5724	5970	6217	6463	6709	6955	7201
65	7447	7693	7939	8185	8431	8677	8923	9169	9415	9661
66	9907	0̄153	0̄399	0̄645	0̄891	1̄136	1̄382	1̄628	1̄874	2̄120
67	247 2365	2611	2857	3103	3349	3594	3840	4086	4331	4577
68	4823	5068	5314	5559	5805	6051	6296	6542	6787	7033
69	7278	7524	7769	8015	8260	8506	8751	8997	9242	9487
1770	9733	9978	0̄223	0̄469	0̄714	0̄959	1̄205	1̄450	1̄695	1̄940
71	248 2186	2431	2676	2921	3166	3412	3657	3902	4147	4392
72	4637	4882	5127	5372	5617	5862	6107	6352	6597	6842
73	7087	7332	7577	7822	8067	8312	8557	8802	9047	9291
74	9536	9781	0̄026	0̄271	0̄515	0̄760	1̄005	1̄249	1̄494	1̄739
75	249 1984	2228	2473	2718	2962	3207	3451	3696	3941	4185
76	4430	4674	4919	5163	5408	5652	5897	6141	6385	6630
77	6874	7119	7363	7607	7852	8096	8340	8585	8829	9073
78	9318	9562	9806	0̄050	0̄294	0̄539	0̄783	1̄027	1̄271	1̄515
79	250 1759	2004	2248	2492	2736	2980	3224	3468	3712	3956
1780	4200	4444	4688	4932	5176	5420	5664	5908	6151	6395
81	6639	6883	7127	7371	7614	7858	8102	8346	8590	8833
82	9077	9321	9564	9808	0̄052	0̄295	0̄539	0̄783	1̄026	1̄270
83	251 1513	1757	2001	2244	2488	2731	2975	3218	3462	3705
84	3949	4192	4435	4679	4922	5166	5409	5652	5896	6139
85	6382	6625	6869	7112	7355	7599	7842	8085	8328	8571
86	8815	9058	9301	9544	9787	0̄030	0̄273	0̄516	0̄759	1̄002
87	252 1246	1489	1732	1975	2218	2461	2703	2946	3189	3432
88	3675	3918	4161	4404	4647	4889	5132	5375	5618	5861
89	6103	6346	6589	6832	7074	7317	7560	7802	8045	8288
1790	8530	8773	9016	9258	9501	9743	9986	0̄228	0̄471	0̄713
91	253 0956	1198	1441	1683	1926	2168	2411	2653	2895	3138
92	3380	3622	3865	4107	4349	4592	4834	5076	5318	5561
93	5803	6045	6287	6529	6772	7014	7256	7498	7740	7982
94	8224	8466	8709	8951	9193	9435	9677	9919	0̄161	0̄403
95	254 0645	0886	1128	1370	1612	1854	2096	2338	2580	2822
96	3063	3305	3547	3789	4030	4272	4514	4756	4997	5239
97	5481	5722	5964	6206	6447	6689	6931	7172	7414	7655
98	7897	8138	8380	8621	8863	9104	9346	9587	9829	0̄070
99	255 0312	0553	0794	1036	1277	1519	1760	2001	2242	2484
1800	2725	2966	3208	3449	3690	3931	4172	4414	4655	4896
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	249	248
1	24.9	24.8
2	49.8	49.6
3	74.7	74.4
4	99.6	99.2
5	124.5	124.0
6	149.4	148.8
7	174.3	173.6
8	199.2	198.4
9	224.1	223.2

	247	246
1	24.7	24.6
2	49.4	49.2
3	74.1	73.8
4	98.8	98.4
5	123.5	123.0
6	148.2	147.6
7	172.9	172.2
8	197.6	196.8
9	222.3	221.4

	245	244
1	24.5	24.4
2	49.0	48.8
3	73.5	73.2
4	98.0	97.6
5	122.5	122.0
6	147.0	146.4
7	171.5	170.8
8	196.0	195.2
9	220.5	219.6

	243	242
1	24.3	24.2
2	48.6	48.4
3	72.9	72.6
4	97.2	96.8
5	121.5	121.0
6	145.8	145.2
7	170.1	169.4
8	194.4	193.6
9	218.7	217.8

	241
1	24.1
2	48.2
3	72.3
4	96.4
5	120.5
6	144.6
7	168.7
8	192.8
9	216.9

P. P.

17500″ = 4° 51′ 40″	1750″ = 0° 29′ 10″	S. 4.685 5697	T. 5853
17600 = 4 53 20	1760 = 0 29 20	5696	5854
17700 = 4 55 0	1770 = 0 29 30	5695	5855
17800 = 4 56 40	1780 = 0 29 40	5695	5856
17900 = 4 58 20	1790 = 0 29 50	5694	5858

N.	0	1	2	3	4	5	6	7	8	9
1800	255 2725	2966	3208	3449	3690	3931	4172	4414	4655	4896
01	5137	5378	5619	5860	6102	6343	6584	6825	7066	7307
02	7548	7789	8030	8271	8512	8753	8994	9235	9475	9716
03	9957	0̄198	0̄439	0̄680	0̄921	1̄161	1̄402	1̄643	1̄884	2̄125
04	256 2365	2606	2847	3087	3328	3569	3810	4050	4291	4531
05	4772	5013	5253	5494	5734	5975	6215	6456	6696	6937
06	7177	7418	7658	7899	8139	8380	8620	8860	9101	9341
07	9582	9822	0̄062	0̄302	0̄543	0̄783	1̄023	1̄264	1̄504	1̄744
08	257 1984	2224	2465	2705	2945	3185	3425	3665	3905	4146
09	4386	4626	4866	5106	5346	5586	5826	6066	6306	6546
1810	6786	7026	7266	7506	7745	7985	8225	8465	8705	8945
11	9185	9424	9664	9904	0̄144	0̄383	0̄623	0̄863	1̄103	1̄342
12	258 1582	1822	2061	2301	2541	2780	3020	3259	3499	3738
13	3978	4218	4457	4697	4936	5176	5415	5655	5894	6133
14	6373	6612	6852	7091	7330	7570	7809	8048	8288	8527
15	8766	9006	9245	9484	9723	9963	0̄202	0̄441	0̄680	0̄919
16	259 1158	1398	1637	1876	2115	2354	2593	2832	3071	3310
17	3549	3788	4027	4266	4505	4744	4983	5222	5461	5700
18	5939	6178	6417	6655	6894	7133	7372	7611	7849	8088
19	8327	8566	8804	9043	9282	9521	9759	9998	0̄237	0̄475
1820	260 0714	0952	1191	1430	1668	1907	2145	2384	2622	2861
21	3099	3338	3576	3815	4053	4292	4530	4769	5007	5245
22	5484	5722	5960	6199	6437	6675	6914	7152	7390	7628
23	7867	8105	8343	8581	8820	9058	9296	9534	9772	0̄010
24	261 0248	0486	0725	0963	1201	1439	1677	1915	2153	2391
25	2629	2867	3105	3343	3580	3818	4056	4294	4532	4770
26	5008	5246	5483	5721	5959	6197	6435	6672	6910	7148
27	7385	7623	7861	8099	8336	8574	8811	9049	9287	9524
28	9762	9999	0̄237	0̄475	0̄712	0̄950	1̄187	1̄425	1̄662	1̄900
29	262 2137	2374	2612	2849	3087	3324	3562	3799	4036	4274
1830	4511	4748	4986	5223	5460	5697	5935	6172	6409	6646
31	6883	7121	7358	7595	7832	8069	8306	8543	8781	9018
32	9255	9492	9729	9966	0̄203	0̄440	0̄677	0̄914	1̄151	1̄388
33	263 1625	1862	2098	2335	2572	2809	3046	3283	3520	3757
34	3993	4230	4467	4704	4940	5177	5414	5651	5887	6124
35	6361	6597	6834	7071	7307	7544	7780	8017	8254	8490
36	8727	8963	9200	9436	9673	9909	0̄146	0̄382	0̄619	0̄855
37	264 1092	1328	1564	1801	2037	2273	2510	2746	2982	3219
38	3455	3691	3928	4164	4400	4636	4873	5109	5345	5581
39	5817	6053	6290	6526	6762	6998	7234	7470	7706	7942
1840	8178	8414	8650	8886	9122	9358	9594	9830	0̄066	0̄302
41	265 0538	0774	1010	1246	1481	1717	1953	2189	2425	2660
42	2896	3132	3368	3604	3839	4075	4311	4546	4782	5018
43	5253	5489	5725	5960	6196	6431	6667	6903	7138	7374
44	7609	7845	8080	8316	8551	8787	9022	9257	9493	9728
45	9964	0̄199	0̄434	0̄670	0̄905	1̄140	1̄376	1̄611	1̄846	2̄082
46	266 2317	2552	2787	3023	3258	3493	3728	3963	4199	4434
47	4669	4904	5139	5374	5609	5844	6080	6315	6550	6785
48	7020	7255	7490	7725	7960	8195	8429	8664	8899	9134
49	9369	9604	9839	0̄074	0̄309	0̄543	0̄778	1̄013	1̄248	1̄483
1850	267 1717	1952	2187	2421	2656	2891	3126	3360	3595	3830
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	242	241
1	24.2	24.1
2	48.4	48.2
3	72.6	72.3
4	96.8	96.4
5	121.0	120.5
6	145.2	144.6
7	169.4	168.7
8	193.6	192.8
9	217.8	216.9

	240	239
1	24.0	23.9
2	48.0	47.8
3	72.0	71.7
4	96.0	95.6
5	120.0	119.5
6	144.0	143.4
7	168.0	167.3
8	192.0	191.2
9	216.0	215.1

	238	237
1	23.8	23.7
2	47.6	47.4
3	71.4	71.1
4	95.2	94.8
5	119.0	118.5
6	142.8	142.2
7	166.6	165.9
8	190.4	189.6
9	214.2	213.3

	236	235
1	23.6	23.5
2	47.2	47.0
3	70.8	70.5
4	94.4	94.0
5	118.0	117.5
6	141.6	141.0
7	165.2	164.5
8	188.8	188.0
9	212.4	211.5

P. P.

18000″ = 5° 0′ 0″ 1800″ = 0° 30′ 0″ S. 4.685 5694 T. 5859
18100 = 5 1 40 1810 = 0 30 10 5693 5860
18200 = 5 3 20 1820 = 0 30 20 5692 5861
18300 = 5 5 0 1830 = 0 30 30 5692 5863
18400 = 5 6 40 1840 = 0 30 40 5691 5864

N.	0	1	2	3	4	5	6	7	8	9
1850	267 1717	1952	2187	2421	2656	2891	3126	3360	3595	3830
51	4064	4299	4533	4768	5003	5237	5472	5706	5941	6175
52	6410	6644	6879	7113	7348	7582	7817	8051	8285	8520
53	8754	8989	9223	9457	9692	9926	0̅160	0̅394	0̅629	0̅863
54	268 1097	1332	1566	1800	2034	2268	2503	2737	2971	3205
55	3439	3673	3907	4141	4376	4610	4844	5078	5312	5546
56	5780	6014	6248	6482	6716	6950	7183	7417	7651	7885
57	8119	8353	8587	8821	9054	9288	9522	9756	9990	0̅223
58	269 0457	0691	0925	1158	1392	1626	1859	2093	2327	2560
59	2794	3028	3261	3495	3728	3962	4195	4429	4662	4896
1860	5129	5363	5596	5830	6063	6297	6530	6764	6997	7230
61	7464	7697	7930	8164	8397	8630	8864	9097	9330	9564
62	9797	0̅030	0̅263	0̅496	0̅730	0̅963	1̅196	1̅429	1̅662	1̅895
63	270 2129	2362	2595	2828	3061	3294	3527	3760	3993	4226
64	4459	4692	4925	5158	5391	5624	5857	6090	6323	6555
65	6788	7021	7254	7487	7720	7953	8185	8418	8651	8884
66	9116	9349	9582	9815	0̅047	0̅280	0̅513	0̅745	0̅978	1̅211
67	271 1443	1676	1908	2141	2374	2606	2839	3071	3304	3536
68	3769	4001	4234	4466	4699	4931	5163	5396	5628	5861
69	6093	6325	6558	6790	7022	7255	7487	7719	7952	8184
1870	8416	8648	8881	9113	9345	9577	9809	0̅041	0̅274	0̅506
71	272 0738	0970	1202	1434	1666	1898	2130	2362	2594	2826
72	3058	3290	3522	3754	3986	4218	4450	4682	4914	5146
73	5378	5610	5841	6073	6305	6537	6769	7001	7232	7464
74	7696	7928	8159	8391	8623	8854	9086	9318	9549	9781
75	273 0013	0244	0476	0708	0939	1171	1402	1634	1865	2097
76	2328	2560	2791	3023	3254	3486	3717	3949	4180	4411
77	4643	4874	5105	5337	5568	5799	6031	6262	6493	6725
78	6956	7187	7418	7650	7881	8112	8343	8574	8806	9037
79	9268	9499	9730	9961	0̅192	0̅423	0̅654	0̅885	1̅116	1̅347
1880	274 1578	1809	2040	2271	2502	2733	2964	3195	3426	3657
81	3888	4119	4350	4581	4811	5042	5273	5504	5735	5965
82	6196	6427	6658	6888	7119	7350	7581	7811	8042	8273
83	8503	8734	8964	9195	9426	9656	9887	0̅117	0̅348	0̅578
84	275 0809	1039	1270	1500	1731	1961	2192	2422	2653	2883
85	3114	3344	3574	3805	4035	4265	4496	4726	4956	5187
86	5417	5647	5877	6108	6338	6568	6798	7028	7259	7489
87	7719	7949	8179	8409	8640	8870	9100	9330	9560	9790
88	276 0020	0250	0480	0710	0940	1170	1400	1630	1860	2090
89	2320	2549	2779	3009	3239	3469	3699	3929	4158	4388
1890	4618	4848	5078	5307	5537	5767	5997	6226	6456	6686
91	6915	7145	7375	7604	7834	8063	8293	8523	8752	8982
92	9211	9441	9670	9900	0̅129	0̅359	0̅588	0̅818	1̅047	1̅277
93	277 1506	1736	1965	2194	2424	2653	2882	3112	3341	3570
94	3800	4029	4258	4488	4717	4946	5175	5405	5634	5863
95	6092	6321	6550	6780	7009	7238	7467	7696	7925	8154
96	8383	8612	8841	9070	9299	9528	9757	9986	0̅215	0̅444
97	278 0673	0902	1131	1360	1589	1818	2047	2276	2504	2733
98	2962	3191	3420	3648	3877	4106	4335	4564	4792	5021
99	5250	5478	5707	5936	6164	6393	6622	6850	7079	7307
1900	7536	7765	7993	8222	8450	8679	8907	9136	9364	9593
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	235	234
1	23.5	23.4
2	47.0	46.8
3	70.5	70.2
4	94.0	93.6
5	117.5	117.0
6	141.0	140.4
7	164.5	163.8
8	188.0	187.2
9	211.5	210.6

	233	232
1	23.3	23.2
2	46.6	46.4
3	69.9	69.6
4	93.2	92.8
5	116.5	116.0
6	139.8	139.2
7	163.1	162.4
8	186.4	185.6
9	209.7	208.8

	231	230
1	23.1	23.0
2	46.2	46.0
3	69.3	69.0
4	92.4	92.0
5	115.5	115.0
6	138.6	138.0
7	161.7	161.0
8	184.8	184.0
9	207.9	207.0

	229	228
1	22.9	22.8
2	45.8	45.6
3	68.7	68.4
4	91.6	91.2
5	114.5	114.0
6	137.4	136.8
7	160.3	159.6
8	183.2	182.4
9	206.1	205.2

P. P.

18500″ = 5° 8′ 20″	1850″ = 0° 30′ 50″	S. 4.685 5690	T. 5865
18600 = 5 10 0	1860 = 0 31 0	5690	5866
18700 = 5 11 40	1870 = 0 31 10	5689	5868
18800 = 5 13 20	1880 = 0 31 20	5689	5869
18900 = 5 15 0	1890 = 0 31 30	5688	5870

N.	0	1	2	3	4	5	6	7	8	9
1900	278 7536	7765	7993	8222	8450	8679	8907	9136	9364	9593
01	9821	0̄050	0̄278	0̄506	0̄735	0̄963	1̄192	1̄420	1̄648	1̄877
02	279 2105	2333	2562	2790	3018	3247	3475	3703	3931	4160
03	4388	4616	4844	5072	5301	5529	5757	5985	6213	6441
04	6669	6898	7126	7354	7582	7810	8038	8266	8494	8722
05	8950	9178	9406	9634	9862	0̄090	0̄317	0̄545	0̄773	1̄001
06	280 1229	1457	1685	1912	2140	2368	2596	2824	3051	3279
07	3507	3735	3962	4190	4418	4645	4873	5101	5328	5556
08	5784	6011	6239	6467	6694	6922	7149	7377	7604	7832
09	8059	8287	8514	8742	8969	9197	9424	9651	9879	0̄106
1910	281 0334	0561	0788	1016	1243	1470	1698	1925	2152	2380
11	2607	2834	3061	3289	3516	3743	3970	4197	4425	4652
12	4879	5106	5333	5560	5787	6014	6242	6469	6696	6923
13	7150	7377	7604	7831	8058	8285	8512	8739	8966	9192
14	9419	9646	9873	0̄100	0̄327	0̄554	0̄781	1̄007	1̄234	1̄461
15	282 1688	1915	2141	2368	2595	2822	3048	3275	3502	3728
16	3955	4182	4408	4635	4862	5088	5315	5541	5768	5995
17	6221	6448	6674	6901	7127	7354	7580	7807	8033	8260
18	8486	8712	8939	9165	9392	9618	9844	0̄071	0̄297	0̄523
19	283 0750	0976	1202	1429	1655	1881	2107	2334	2560	2786
1920	3012	3238	3465	3691	3917	4143	4369	4595	4821	5048
21	5274	5500	5726	5952	6178	6404	6630	6856	7082	7308
22	7534	7760	7986	8212	8438	8663	8889	9115	9341	9567
23	9793	0̄019	0̄245	0̄470	0̄696	0̄922	1̄148	1̄373	1̄599	1̄825
24	284 2051	2276	2502	2728	2953	3179	3405	3630	3856	4082
25	4307	4533	4759	4984	5210	5435	5661	5886	6112	6337
26	6563	6788	7014	7239	7465	7690	7916	8141	8366	8592
27	8817	9043	9268	9493	9719	9944	0̄169	0̄394	0̄620	0̄845
28	285 1070	1296	1521	1746	1971	2196	2422	2647	2872	3097
29	3322	3547	3773	3998	4223	4448	4673	4898	5123	5348
1930	5573	5798	6023	6248	6473	6698	6923	7148	7373	7598
31	7823	8048	8273	8497	8722	8947	9172	9397	9622	9846
32	286 0071	0296	0521	0746	0970	1195	1420	1644	1869	2094
33	2319	2543	2768	2993	3217	3442	3666	3891	4116	4340
34	4565	4789	5014	5238	5463	5687	5912	6136	6361	6585
35	6810	7034	7259	7483	7707	7932	8156	8381	8605	8829
36	9054	9278	9502	9726	9951	0̄175	0̄399	0̄624	0̄848	1̄072
37	287 1296	1520	1745	1969	2193	2417	2641	2865	3090	3314
38	3538	3762	3986	4210	4434	4658	4882	5106	5330	5554
39	5778	6002	6226	6450	6674	6898	7122	7346	7570	7793
1940	8017	8241	8465	8689	8913	9136	9360	9584	9808	0̄032
41	288 0255	0479	0703	0927	1150	1374	1598	1821	2045	2269
42	2492	2716	2939	3163	3387	3610	3834	4057	4281	4504
43	4728	4952	5175	5399	5622	5845	6069	6292	6516	6739
44	6963	7186	7409	7633	7856	8079	8303	8526	8749	8973
45	9196	9419	9643	9866	0̄089	0̄312	0̄536	0̄759	0̄982	1̄205
46	289 1428	1652	1875	2098	2321	2544	2767	2990	3213	3436
47	3660	3883	4106	4329	4552	4775	4998	5221	5444	5667
48	5890	6112	6335	6558	6781	7004	7227	7450	7673	7896
49	8118	8341	8564	8787	9010	9232	9455	9678	9901	0̄123
1950	290 0346	0569	0792	1014	1237	1460	1682	1905	2127	2350
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	229	228
1	22.9	22.8
2	45.8	45.6
3	68.7	68.4
4	91.6	91.2
5	114.5	114.0
6	137.4	136.8
7	160.3	159.6
8	183.2	182.4
9	206.1	205.2

	227	226
1	22.7	22.6
2	45.4	45.2
3	68.1	67.8
4	90.8	90.4
5	113.5	113.0
6	136.2	135.6
7	158.9	158.2
8	181.6	180.8
9	204.3	203.4

	225	224
1	22.5	22.4
2	45.0	44.8
3	67.5	67.2
4	90.0	89.6
5	112.5	112.0
6	135.0	134.4
7	157.5	156.8
8	180.0	179.2
9	202.5	201.6

	223
1	22.3
2	44.6
3	66.9
4	89.2
5	111.5
6	133.8
7	156.1
8	178.4
9	200.7

P. P.

19000″ = 5° 16′ 40″	1900″ = 0° 31′ 40″	S. 4.685 5687	T. 5872
19100 = 5 18 20	1910 = 0 31 50	5687	5873
19200 = 5 20 0	1920 = 0 32 0	5686	5874
19300 = 5 21 40	1930 = 0 32 10	5685	5875
19400 = 5 23 20	1940 = 0 32 20	5685	5877

N.	0	1	2	3	4	5	6	7	8	9
1950	290 0346	0569	0792	1014	1237	1460	1682	1905	2127	2350
51	2573	2795	3018	3240	3463	3686	3908	4131	4353	4576
52	4798	5021	5243	5466	5688	5910	6133	6355	6578	6800
53	7022	7245	7467	7690	7912	8134	8356	8579	8801	9023
54	9246	9468	9690	9912	$\overline{0}135$	$\overline{0}357$	$\overline{0}579$	$\overline{0}801$	$\overline{1}023$	$\overline{1}245$
55	291 1468	1690	1912	2134	2356	2578	2800	3022	3244	3466
56	3689	3911	4133	4355	4577	4799	5020	5242	5464	5686
57	5908	6130	6352	6574	6796	7018	7240	7461	7683	7905
58	8127	8349	8570	8792	9014	9236	9458	9679	9901	$\overline{0}123$
59	292 0344	0566	0788	1009	1231	1453	1674	1896	2118	2339
1960	2561	2782	3004	3225	3447	3668	3890	4111	4333	4554
61	4776	4997	5219	5440	5662	5883	6105	6326	6547	6769
62	6990	7211	7433	7654	7875	8097	8318	8539	8760	8982
63	9203	9424	9645	9867	$\overline{0}088$	$\overline{0}309$	$\overline{0}530$	$\overline{0}751$	$\overline{0}973$	$\overline{1}194$
64	293 1415	1636	1857	2078	2299	2520	2741	2962	3183	3405
65	3626	3847	4068	4289	4510	4730	4951	5172	5393	5614
66	5835	6056	6277	6498	6719	6940	7160	7381	7602	7823
67	8044	8264	8485	8706	8927	9147	9368	9589	9810	$\overline{0}030$
68	294 0251	0472	0692	0913	1134	1354	1575	1795	2016	2237
69	2457	2678	2898	3119	3339	3560	3780	4001	4221	4442
1970	4662	4883	5103	5324	5544	5764	5985	6205	6426	6646
71	6866	7087	7307	7527	7748	7968	8188	8408	8629	8849
72	9069	9289	9510	9730	9950	$\overline{0}170$	$\overline{0}390$	$\overline{0}610$	$\overline{0}831$	$\overline{1}051$
73	295 1271	1491	1711	1931	2151	2371	2591	2811	3031	3251
74	3471	3691	3911	4131	4351	4571	4791	5011	5231	5451
75	5671	5891	6111	6331	6550	6770	6990	7210	7430	7650
76	7869	8089	8309	8529	8748	8968	9188	9408	9627	9847
77	296 0067	0286	0506	0726	0945	1165	1385	1604	1824	2043
78	2263	2482	2702	2922	3141	3361	3580	3800	4019	4238
79	4458	4677	4897	5116	5336	5555	5774	5994	6213	6433
1980	6652	6871	7091	7310	7529	7748	7968	8187	8406	8626
81	8845	9064	9283	9502	9722	9941	$\overline{0}160$	$\overline{0}379$	$\overline{0}598$	$\overline{0}817$
82	297 1037	1256	1475	1694	1913	2132	2351	2570	2789	3008
83	3227	3446	3665	3884	4103	4322	4541	4760	4979	5198
84	5417	5636	5854	6073	6292	6511	6730	6949	7168	7386
85	7605	7824	8043	8261	8480	8699	8918	9136	9355	9574
86	9792	$\overline{0}011$	$\overline{0}230$	$\overline{0}448$	$\overline{0}667$	$\overline{0}886$	$\overline{1}104$	$\overline{1}323$	$\overline{1}542$	$\overline{1}760$
87	298 1979	2197	2416	2634	2853	3071	3290	3508	3727	3945
88	4164	4382	4601	4819	5038	5256	5474	5693	5911	6129
89	6348	6566	6785	7003	7221	7439	7658	7876	8094	8313
1990	8531	8749	8967	9185	9404	9622	9840	$\overline{0}058$	$\overline{0}276$	$\overline{0}494$
91	299 0713	0931	1149	1367	1585	1803	2021	2239	2457	2675
92	2893	3111	3329	3547	3765	3983	4201	4419	4637	4855
93	5073	5291	5509	5727	5945	6162	6380	6598	6816	7034
94	7252	7469	7687	7905	8123	8340	8558	8776	8994	9211
95	9429	9647	9864	$\overline{0}082$	$\overline{0}300$	$\overline{0}517$	$\overline{0}735$	$\overline{0}953$	$\overline{1}170$	$\overline{1}388$
96	300 1605	1823	2041	2258	2476	2693	2911	3128	3346	3563
97	3781	3998	4216	4433	4650	4868	5085	5303	5520	5737
98	5955	6172	6390	6607	6824	7042	7259	7476	7693	7911
99	8128	8345	8562	8780	8997	9214	9431	9648	9866	$\overline{0}083$
2000	301 0300	0517	0734	0951	1168	1386	1603	1820	2037	2254
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	223
1	22.3
2	44.6
3	66.9
4	89.2
5	111.5
6	133.8
7	156.1
8	178.4
9	200.7

	222	221
1	22.2	22.1
2	44.4	44.2
3	66.6	66.3
4	88.8	88.4
5	111.0	110.5
6	133.2	132.6
7	155.4	154.7
8	177.6	176.8
9	199.8	198.9

	220	219
1	22.0	21.9
2	44.0	43.8
3	66.0	65.7
4	88.0	87.6
5	110.0	109.5
6	132.0	131.4
7	154.0	153.3
8	176.0	175.2
9	198.0	197.1

	218	217
1	21.8	21.7
2	43.6	43.4
3	65.4	65.1
4	87.2	86.8
5	109.0	108.5
6	130.8	130.2
7	152.6	151.9
8	174.4	173.6
9	196.2	195.3

P. P.

		S.	T.
19500″ = 5°25′ 0″	1950″ = 0°32′ 30″	4.685 5684	5878
19600 = 5 26 40	1960 = 0 32 40	5683	5879
19700 = 5 28 20	1970 = 0 32 50	5683	5881
19800 = 5 30 0	1980 = 0 33 0	5682	5882
19900 = 5 31 40	1990 = 0 33 10	5681	5883

N.	0	1	2	3	4	5	6	7	8	9
2000	301 0300	0517	0734	0951	1168	1386	1603	1820	2037	2254
01	2471	2688	2905	3122	3339	3556	3773	3990	4207	4424
02	4641	4858	5075	5291	5508	5725	5942	6159	6376	6593
03	6809	7026	7243	7460	7677	7893	8110	8327	8544	8760
04	8977	9194	9411	9627	9844	0̄061	0̄277	0̄494	0̄711	0̄927
05	302 1144	1360	1577	1794	2010	2227	2443	2660	2876	3093
06	3309	3526	3742	3959	4175	4392	4608	4825	5041	5257
07	5474	5690	5906	6123	6339	6556	6772	6988	7204	7421
08	7637	7853	8070	8286	8502	8718	8935	9151	9367	9583
09	9799	0̄016	0̄232	0̄448	0̄664	0̄880	1̄096	1̄312	1̄528	1̄745
2010	303 1961	2177	2393	2609	2825	3041	3257	3473	3689	3905
11	4121	4337	4553	4769	4984	5200	5416	5632	5848	6064
12	6280	6496	6711	6927	7143	7359	7575	7790	8006	8222
13	8438	8653	8869	9085	9301	9516	9732	9948	0̄163	0̄379
14	304 0595	0810	1026	1242	1457	1673	1888	2104	2319	2535
15	2751	2966	3182	3397	3613	3828	4043	4259	4474	4690
16	4905	5121	5336	5552	5767	5982	6198	6413	6628	6844
17	7059	7274	7490	7705	7920	8135	8351	8566	8781	8996
18	9212	9427	9642	9857	0̄072	0̄288	0̄503	0̄718	0̄933	1̄148
19	305 1363	1578	1793	2008	2224	2439	2654	2869	3084	3299
2020	3514	3729	3944	4159	4374	4589	4803	5018	5233	5448
21	5663	5878	6093	6308	6523	6737	6952	7167	7382	7597
22	7812	8026	8241	8456	8671	8885	9100	9315	9529	9744
23	9959	0̄174	0̄388	0̄603	0̄817	1̄032	1̄247	1̄461	1̄676	1̄891
24	306 2105	2320	2534	2749	2963	3178	3392	3607	3821	4036
25	4250	4465	4679	4894	5108	5322	5537	5751	5966	6180
26	6394	6609	6823	7037	7252	7466	7680	7895	8109	8323
27	8537	8752	8966	9180	9394	9609	9823	0̄037	0̄251	0̄465
28	307 0680	0894	1108	1322	1536	1750	1964	2178	2392	2606
29	2820	3035	3249	3463	3677	3891	4105	4319	4532	4746
2030	4960	5174	5388	5602	5816	6030	6244	6458	6672	6885
31	7099	7313	7527	7741	7954	8168	8382	8596	8810	9023
32	9237	9451	9664	9878	0̄092	0̄306	0̄519	0̄733	0̄947	1̄160
33	308 1374	1587	1801	2015	2228	2442	2655	2869	3082	3296
34	3509	3723	3936	4150	4363	4577	4790	5004	5217	5431
35	5644	5858	6071	6284	6498	6711	6924	7138	7351	7564
36	7778	7991	8204	8418	8631	8844	9057	9271	9484	9697
37	9910	0̄123	0̄337	0̄550	0̄763	0̄976	1̄189	1̄402	1̄616	1̄829
38	309 2042	2255	2468	2681	2894	3107	3320	3533	3746	3959
39	4172	4385	4598	4811	5024	5237	5450	5663	5876	6089
2040	6302	6515	6727	6940	7153	7366	7579	7792	8004	8217
41	8430	8643	8856	9068	9281	9494	9707	9919	0̄132	0̄345
42	310 0557	0770	0983	1195	1408	1621	1833	2046	2258	2471
43	2684	2896	3109	3321	3534	3746	3959	4171	4384	4596
44	4809	5021	5234	5446	5659	5871	6084	6296	6508	6721
45	6933	7145	7358	7570	7783	7995	8207	8419	8632	8844
46	9056	9269	9481	9693	9905	0̄117	0̄330	0̄542	0̄754	0̄966
47	311 1178	1391	1603	1815	2027	2239	2451	2663	2875	3087
48	3300	3512	3724	3936	4148	4360	4572	4784	4996	5208
49	5420	5632	5843	6055	6267	6479	6691	6903	7115	7327
2050	7539	7750	7962	8174	8386	8598	8810	9021	9233	9445
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	218	217
1	21.8	21.7
2	43.6	43.4
3	65.4	65.1
4	87.2	86.8
5	109.0	108.5
6	130.8	130.2
7	152.6	151.9
8	174.4	173.6
9	196.2	195.3

	216	215
1	21.6	21.5
2	43.2	43.0
3	64.8	64.5
4	86.4	86.0
5	108.0	107.5
6	129.6	129.0
7	151.2	150.5
8	172.8	172.0
9	194.4	193.5

	214	213
1	21.4	21.3
2	42.8	42.6
3	64.2	63.9
4	85.6	85.2
5	107.0	106.5
6	128.4	127.8
7	149.8	149.1
8	171.2	170.4
9	192.6	191.7

	212
1	21.2
2	42.4
3	63.6
4	84.8
5	106.0
6	127.2
7	148.4
8	169.6
9	190.8

P. P.

20000″ = 5° 33′ 20″	2000″ = 0° 33′ 20″	S. 4.685 5681	T. 5885
20100 = 5 35 0	2010 = 0 33 30	5680	5886
20200 = 5 36 40	2020 = 0 33 40	5679	5888
20300 = 5 38 20	2030 = 0 33 50	5679	5889
20400 = 5 40 0	2040 = 0 34 0	5678	5890

N.	0	1	2	3	4	5	6	7	8	9
2050	311 7539	7750	7962	8174	8386	8598	8810	9021	9233	9445
51	9657	9868	0̄080	0̄292	0̄504	0̄715	0̄927	1̄139	1̄350	1̄562
52	312 1774	1985	2197	2408	2620	2832	3043	3255	3466	3678
53	3889	4101	4313	4524	4736	4947	5159	5370	5581	5793
54	6004	6216	6427	6639	6850	7061	7273	7484	7696	7907
55	8118	8330	8541	8752	8964	9175	9386	9597	9809	0̄020
56	313 0231	0442	0654	0865	1076	1287	1498	1709	1921	2132
57	2343	2554	2765	2976	3187	3398	3610	3821	4032	4243
58	4454	4665	4876	5087	5298	5509	5720	5931	6142	6353
59	6563	6774	6985	7196	7407	7618	7829	8040	8251	8461
2060	8672	8883	9094	9305	9515	9726	9937	0̄148	0̄358	0̄569
61	314 0780	0991	1201	1412	1623	1833	2044	2255	2465	2676
62	2887	3097	3308	3518	3729	3940	4150	4361	4571	4782
63	4992	5203	5413	5624	5834	6045	6255	6466	6676	6887
64	7097	7307	7518	7728	7939	8149	8359	8570	8780	8990
65	9201	9411	9621	9831	0̄042	0̄252	0̄462	0̄672	0̄883	1̄093
66	315 1303	1513	1724	1934	2144	2354	2564	2774	2985	3195
67	3405	3615	3825	4035	4245	4455	4665	4875	5085	5295
68	5505	5715	5925	6135	6345	6555	6765	6975	7185	7395
69	7605	7815	8025	8235	8444	8654	8864	9074	9284	9494
2070	9703	9913	0̄123	0̄333	0̄543	0̄752	0̄962	1̄172	1̄382	1̄591
71	316 1801	2011	2220	2430	2640	2849	3059	3269	3478	3688
72	3898	4107	4317	4526	4736	4945	5155	5364	5574	5784
73	5993	6203	6412	6621	6831	7040	7250	7459	7669	7878
74	8088	8297	8506	8716	8925	9134	9344	9553	9762	9972
75	317 0181	0390	0600	0809	1018	1227	1437	1646	1855	2064
76	2273	2483	2692	2901	3110	3319	3528	3738	3947	4156
77	4365	4574	4783	4992	5201	5410	5619	5828	6037	6246
78	6455	6664	6873	7082	7291	7500	7709	7918	8127	8336
79	8545	8754	8963	9172	9380	9589	9798	0̄007	0̄216	0̄425
2080	318 0633	0842	1051	1260	1468	1677	1886	2095	2303	2512
81	2721	2929	3138	3347	3556	3764	3973	4181	4390	4599
82	4807	5016	5224	5433	5642	5850	6059	6267	6476	6684
83	6893	7101	7310	7518	7727	7935	8143	8352	8560	8769
84	8977	9186	9394	9602	9811	0̄019	0̄227	0̄436	0̄644	0̄852
85	319 1061	1269	1477	1685	1894	2102	2310	2518	2727	2935
86	3143	3351	3559	3768	3976	4184	4392	4600	4808	5016
87	5224	5433	5641	5849	6057	6265	6473	6681	6889	7097
88	7305	7513	7721	7929	8137	8345	8553	8761	8969	9176
89	9384	9592	9800	0̄008	0̄216	0̄424	0̄632	0̄839	1̄047	1̄255
2090	320 1463	1671	1878	2086	2294	2502	2709	2917	3125	3333
91	3540	3748	3956	4163	4371	4579	4786	4994	5202	5409
92	5617	5824	6032	6240	6447	6655	6862	7070	7277	7485
93	7692	7900	8107	8315	8522	8730	8937	9145	9352	9559
94	9767	9974	0̄182	0̄389	0̄596	0̄804	1̄011	1̄218	1̄426	1̄633
95	321 1840	2048	2255	2462	2669	2877	3084	3291	3498	3706
96	3913	4120	4327	4534	4742	4949	5156	5363	5570	5777
97	5984	6191	6398	6606	6813	7020	7227	7434	7641	7848
98	8055	8262	8469	8676	8883	9090	9297	9504	9711	9917
99	322 0124	0331	0538	0745	0952	1159	1366	1572	1779	1986
2100	2193	2400	2607	2813	3020	3227	3434	3640	3847	4054
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	212
1	21.2
2	42.4
3	63.6
4	84.8
5	106.0
6	127.2
7	148.4
8	169.6
9	190.8

	211	210
1	21.1	21.0
2	42.2	42.0
3	63.3	63.0
4	84.4	84.0
5	105.5	105.0
6	126.6	126.0
7	147.7	147.0
8	168.8	168.0
9	189.9	189.0

	209	208
1	20.9	20.8
2	41.8	41.6
3	62.7	62.4
4	83.6	83.2
5	104.5	104.0
6	125.4	124.8
7	146.3	145.6
8	167.2	166.4
9	188.1	187.2

	207	206
1	20.7	20.6
2	41.4	41.2
3	62.1	61.8
4	82.8	82.4
5	103.5	103.0
6	124.2	123.6
7	144.9	144.2
8	165.6	164.8
9	186.3	185.4

P. P.

20500″ = 5° 41′ 40″ 2050″ = 0° 34′ 10″ S. 4.685 5677 T. 5892
20600 = 5 43 20 2060 = 0 34 20 5676 5893
20700 = 5 45 0 2070 = 0 34 30 5676 5894
20800 = 5 46 40 2080 = 0 34 40 5675 5896
20900 = 5 48 20 2090 = 0 34 50 5674 5897

N.	0	1	2	3	4	5	6	7	8	9
2100	322 2193	2400	2607	2813	3020	3227	3434	3640	3847	4054
01	4261	4467	4674	4881	5087	5294	5501	5707	5914	6121
02	6327	6534	6740	6947	7153	7360	7567	7773	7980	8186
03	8393	8599	8806	9012	9219	9425	9632	9838	0̄045	0̄251
04	323 0457	0664	0870	1077	1283	1489	1696	1902	2108	2315
05	2521	2727	2934	3140	3346	3552	3759	3965	4171	4377
06	4584	4790	4996	5202	5408	5615	5821	6027	6233	6439
07	6645	6851	7058	7264	7470	7676	7882	8088	8294	8500
08	8706	8912	9118	9324	9530	9736	9942	0̄148	0̄354	0̄560
09	324 0766	0972	1178	1384	1589	1795	2001	2207	2413	2619
2110	2825	3030	3236	3442	3648	3854	4059	4265	4471	4677
11	4882	5088	5294	5499	5705	5911	6117	6322	6528	6734
12	6939	7145	7350	7556	7762	7967	8173	8378	8584	8789
13	8995	9201	9406	9612	9817	0̄023	0̄228	0̄433	0̄639	0̄844
14	325 1050	1255	1461	1666	1872	2077	2282	2488	2693	2898
15	3104	3309	3514	3720	3925	4130	4336	4541	4746	4951
16	5157	5362	5567	5772	5978	6183	6388	6593	6798	7003
17	7209	7414	7619	7824	8029	8234	8439	8644	8849	9055
18	9260	9465	9670	9875	0̄080	0̄285	0̄490	0̄695	0̄900	1̄105
19	326 1310	1515	1719	1924	2129	2334	2539	2744	2949	3154
2120	3359	3563	3768	3973	4178	4383	4588	4792	4997	5202
21	5407	5611	5816	6021	6226	6430	6635	6840	7044	7249
22	7454	7658	7863	8068	8272	8477	8682	8886	9091	9295
23	9500	9705	9909	0̄114	0̄318	0̄523	0̄727	0̄932	1̄136	1̄341
24	327 1545	1750	1954	2158	2363	2567	2772	2976	3181	3385
25	3589	3794	3998	4202	4407	4611	4815	5020	5224	5428
26	5633	5837	6041	6245	6450	6654	6858	7062	7267	7471
27	7675	7879	8083	8287	8492	8696	8900	9104	9308	9512
28	9716	9920	0̄124	0̄328	0̄533	0̄737	0̄941	1̄145	1̄349	1̄553
29	328 1757	1961	2165	2369	2572	2776	2980	3184	3388	3592
2130	3796	4000	4204	4408	4612	4815	5019	5223	5427	5631
31	5834	6038	6242	6446	6650	6853	7057	7261	7465	7668
32	7872	8076	8279	8483	8687	8890	9094	9298	9501	9705
33	9909	0̄112	0̄316	0̄519	0̄723	0̄926	1̄130	1̄334	1̄537	1̄741
34	329 1944	2148	2351	2555	2758	2962	3165	3369	3572	3775
35	3979	4182	4386	4589	4792	4996	5199	5402	5606	5809
36	6012	6216	6419	6622	6826	7029	7232	7436	7639	7842
37	8045	8248	8452	8655	8858	9061	9264	9468	9671	9874
38	330 0077	0280	0483	0686	0889	1093	1296	1499	1702	1905
39	2108	2311	2514	2717	2920	3123	3326	3529	3732	3935
2140	4138	4341	4544	4747	4949	5152	5355	5558	5761	5964
41	6167	6370	6572	6775	6978	7181	7384	7586	7789	7992
42	8195	8397	8600	8803	9006	9208	9411	9614	9816	0̄019
43	331 0222	0424	0627	0830	1032	1235	1437	1640	1843	2045
44	2248	2450	2653	2855	3058	3261	3463	3666	3868	4070
45	4273	4475	4678	4880	5083	5285	5488	5690	5892	6095
46	6297	6500	6702	6904	7107	7309	7511	7714	7916	8118
47	8320	8523	8725	8927	9129	9332	9534	9736	9938	0̄141
48	332 0343	0545	0747	0949	1151	1354	1556	1758	1960	2162
49	2364	2566	2768	2970	3172	3374	3577	3779	3981	4183
2150	4385	4587	4789	4991	5193	5394	5596	5798	6000	6202
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	207	206
1	20.7	20.6
2	41.4	41.2
3	62.1	61.8
4	82.8	82.4
5	103.5	103.0
6	124.2	123.6
7	144.9	144.2
8	165.6	164.8
9	186.3	185.4

	205	204
1	20.5	20.4
2	41.0	40.8
3	61.5	61.2
4	82.0	81.6
5	102.5	102.0
6	123.0	122.4
7	143.5	142.8
8	164.0	163.2
9	184.5	183.6

	203	202
1	20.3	20.2
2	40.6	40.4
3	60.9	60.6
4	81.2	80.8
5	101.5	101.0
6	121.8	121.2
7	142.1	141.4
8	162.4	161.6
9	182.7	181.8

P. P.

21000″ = 5° 50′ 0″ 2100″ = 0° 35′ 0″ S. 4.685 5674 T. 5899
21100 = 5 51 40 2110 = 0 35 10 5673 5900
21200 = 5 53 20 2120 = 0 35 20 5672 5902
21300 = 5 55 0 2130 = 0 35 30 5671 5903
21400 = 5 56 40 2140 = 0 35 40 5671 5904

N.	0	1	2	3	4	5	6	7	8	9
2150	332 4385	4587	4789	4991	5193	5394	5596	5798	6000	6202
51	6404	6606	6808	7010	7212	7414	7615	7817	8019	8221
52	8423	8624	8826	9028	9230	9432	9633	9835	0̄037	0̄239
53	333 0440	0642	0844	1045	1247	1449	1650	1852	2054	2255
54	2457	2659	2860	3062	3263	3465	3667	3868	4070	4271
55	4473	4674	4876	5077	5279	5480	5682	5883	6085	6286
56	6488	6689	6890	7092	7293	7495	7696	7897	8099	8300
57	8501	8703	8904	9105	9307	9508	9709	9911	0̄112	0̄313
58	334 0514	0716	0917	1118	1319	1521	1722	1923	2124	2325
59	2526	2728	2929	3130	3331	3532	3733	3934	4135	4336
2160	4538	4739	4940	5141	5342	5543	5744	5945	6146	6347
61	6548	6749	6950	7151	7351	7552	7753	7954	8155	8356
62	8557	8758	8959	9159	9360	9561	9762	9963	0̄164	0̄364
63	335 0565	0766	0967	1168	1368	1569	1770	1970	2171	2372
64	2573	2773	2974	3175	3375	3576	3777	3977	4178	4378
65	4579	4780	4980	5181	5381	5582	5782	5983	6183	6384
66	6585	6785	6986	7186	7386	7587	7787	7988	8188	8389
67	8589	8790	8990	9190	9391	9591	9791	9992	0̄192	0̄392
68	336 0593	0793	0993	1194	1394	1594	1795	1995	2195	2395
69	2596	2796	2996	3196	3396	3597	3797	3997	4197	4397
2170	4597	4797	4998	5198	5398	5598	5798	5998	6198	6398
71	6598	6798	6998	7198	7398	7598	7798	7998	8198	8398
72	8598	8798	8998	9198	9398	9598	9798	9998	0̄198	0̄397
73	337 0597	0797	0997	1197	1397	1596	1796	1996	2196	2396
74	2595	2795	2995	3195	3394	3594	3794	3994	4193	4393
75	4593	4792	4992	5192	5391	5591	5791	5990	6190	6389
76	6589	6788	6988	7188	7387	7587	7786	7986	8185	8385
77	8584	8784	8983	9183	9382	9582	9781	9981	0̄180	0̄379
78	338 0579	0778	0978	1177	1376	1576	1775	1974	2174	2373
79	2572	2772	2971	3170	3369	3569	3768	3967	4166	4366
2180	4565	4764	4963	5163	5362	5561	5760	5959	6158	6358
81	6557	6756	6955	7154	7353	7552	7751	7950	8149	8348
82	8547	8746	8946	9145	9344	9543	9742	9940	0̄139	0̄338
83	339 0537	0736	0935	1134	1333	1532	1731	1930	2129	2327
84	2526	2725	2924	3123	3322	3520	3719	3918	4117	4316
85	4514	4713	4912	5111	5309	5508	5707	5906	6104	6303
86	6502	6700	6899	7098	7296	7495	7693	7892	8091	8289
87	8488	8686	8885	9084	9282	9481	9679	9878	0̄076	0̄275
88	340 0473	0672	0870	1069	1267	1466	1664	1862	2061	2259
89	2458	2656	2854	3053	3251	3449	3648	3846	4045	4243
2190	4441	4639	4838	5036	5234	5433	5631	5829	6027	6226
91	6424	6622	6820	7018	7217	7415	7613	7811	8009	8207
92	8405	8604	8802	9000	9198	9396	9594	9792	9990	0̄188
93	341 0386	0584	0782	0980	1178	1376	1574	1772	1970	2168
94	2366	2564	2762	2960	3158	3356	3554	3752	3950	4147
95	4345	4543	4741	4939	5137	5334	5532	5730	5928	6126
96	6323	6521	6719	6917	7114	7312	7510	7708	7905	8103
97	8301	8498	8696	8894	9091	9289	9486	9684	9882	0̄079
98	342 0277	0474	0672	0870	1067	1265	1462	1660	1857	2055
99	2252	2450	2647	2845	3042	3240	3437	3635	3832	4029
2200	4227	4424	4622	4819	5016	5214	5411	5608	5806	6003
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	202	201
1	20.2	20.1
2	40.4	40.2
3	60.6	60.3
4	80.8	80.4
5	101.0	100.5
6	121.2	120.6
7	141.4	140.7
8	161.6	160.8
9	181.8	180.9

	200	199
1	20.0	19.9
2	40.0	39.8
3	60.0	59.7
4	80.0	79.6
5	100.0	99.5
6	120.0	119.4
7	140.0	139.3
8	160.0	159.2
9	180.0	179.1

	198	197
1	19.8	19.7
2	39.6	39.4
3	59.4	59.1
4	79.2	78.8
5	99.0	98.5
6	118.8	118.2
7	138.6	137.9
8	158.4	157.6
9	178.2	177.3

		S.	T.
21500″ = 5° 58′ 20″	2150″ = 0° 35′ 50″	4.685 5670	5906
21600 = 6 0 0	2160 = 0 36 0	5669	5907
21700 = 6 1 40	2170 = 0 36 10	5669	5909
21800 = 6 3 20	2180 = 0 36 20	5668	5910
21900 = 6 5 0	2190 = 0 36 30	5667	5912

N.	0	1	2	3	4	5	6	7	8	9
2200	342 4227	4424	4622	4819	5016	5214	5411	5608	5806	6003
01	6200	6398	6595	6792	6990	7187	7384	7581	7779	7976
02	8173	8370	8568	8765	8962	9159	9356	9554	9751	9948
03	343 0145	0342	0539	0736	0933	1131	1328	1525	1722	1919
04	2116	2313	2510	2707	2904	3101	3298	3495	3692	3889
05	4086	4283	4480	4677	4874	5071	5268	5464	5661	5858
06	6055	6252	6449	6646	6842	7039	7236	7433	7630	7827
07	8023	8220	8417	8614	8810	9007	9204	9401	9597	9794
08	9991	0̄187	0̄384	0̄581	0̄777	0̄974	1̄171	1̄367	1̄564	1̄761
09	344 1957	2154	2350	2547	2743	2940	3137	3333	3530	3726
2210	3923	4119	4316	4512	4709	4905	5102	5298	5495	5691
11	5887	6084	6280	6477	6673	6869	7066	7262	7459	7655
12	7851	8048	8244	8440	8636	8833	9029	9225	9422	9618
13	9814	0̄010	0̄207	0̄403	0̄599	0̄795	0̄991	1̄188	1̄384	1̄580
14	345 1776	1972	2168	2365	2561	2757	2953	3149	3345	3541
15	3737	3933	4129	4325	4522	4718	4914	5110	5306	5502
16	5698	5894	6090	6285	6481	6677	6873	7069	7265	7461
17	7657	7853	8049	8245	8440	8636	8832	9028	9224	9420
18	9615	9811	0̄007	0̄203	0̄399	0̄594	0̄790	0̄986	1̄182	1̄377
19	346 1573	1769	1964	2160	2356	2551	2747	2943	3138	3334
2220	3530	3725	3921	4117	4312	4508	4703	4899	5094	5290
21	5486	5681	5877	6072	6268	6463	6659	6854	7050	7245
22	7441	7636	7831	8027	8222	8418	8613	8808	9004	9199
23	9395	9590	9785	9981	0̄176	0̄371	0̄567	0̄762	0̄957	1̄153
24	347 1348	1543	1738	1934	2129	2324	2519	2715	2910	3105
25	3300	3495	3691	3886	4081	4276	4471	4666	4861	5056
26	5252	5447	5642	5837	6032	6227	6422	6617	6812	7007
27	7202	7397	7592	7787	7982	8177	8372	8567	8762	8957
28	9152	9347	9542	9737	9931	0̄126	0̄321	0̄516	0̄711	0̄906
29	348 1101	1296	1490	1685	1880	2075	2270	2464	2659	2854
2230	3049	3243	3438	3633	3828	4022	4217	4412	4606	4801
31	4996	5190	5385	5580	5774	5969	6164	6358	6553	6747
32	6942	7136	7331	7526	7720	7915	8109	8304	8498	8693
33	8887	9082	9276	9471	9665	9860	0̄054	0̄248	0̄443	0̄637
34	349 0832	1026	1220	1415	1609	1804	1998	2192	2387	2581
35	2775	2970	3164	3358	3552	3747	3941	4135	4330	4524
36	4718	4912	5106	5301	5495	5689	5883	6077	6272	6466
37	6660	6854	7048	7242	7436	7630	7825	8019	8213	8407
38	8601	8795	8989	9183	9377	9571	9765	9959	0̄153	0̄347
39	350 0541	0735	0929	1123	1317	1511	1705	1898	2092	2286
2240	2480	2674	2868	3062	3256	3449	3643	3837	4031	4225
41	4419	4612	4806	5000	5194	5387	5581	5775	5969	6162
42	6356	6550	6743	6937	7131	7325	7518	7712	7905	8099
43	8293	8486	8680	8874	9067	9261	9454	9648	9841	0̄035
44	351 0229	0422	0616	0809	1003	1196	1390	1583	1777	1970
45	2163	2357	2550	2744	2937	3131	3324	3517	3711	3904
46	4098	4291	4484	4678	4871	5064	5258	5451	5644	5837
47	6031	6224	6417	6611	6804	6997	7190	7383	7577	7770
48	7963	8156	8349	8543	8736	8929	9122	9315	9508	9701
49	9895	0̄088	0̄281	0̄474	0̄667	0̄860	1̄053	1̄246	1̄439	1̄632
2250	352 1825	2018	2211	2404	2597	2790	2983	3176	3369	3562
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	198	197
1	19.8	19.7
2	39.6	39.4
3	59.4	59.1
4	79.2	78.8
5	99.0	98.5
6	118.8	118.2
7	138.6	137.9
8	158.4	157.6
9	178.2	177.3

	196	195
1	19.6	19.5
2	39.2	39.0
3	58.8	58.5
4	78.4	78.0
5	98.0	97.5
6	117.6	117.0
7	137.2	136.5
8	156.8	156.0
9	176.4	175.5

	194	193
1	19.4	19.3
2	38.8	38.6
3	58.2	57.9
4	77.6	77.2
5	97.0	96.5
6	116.4	115.8
7	135.8	135.1
8	155.2	154.4
9	174.6	173.7

		S.	T.
22000″ = 6° 6′ 40″	2200″ = 0° 36′ 40″	4.685 5666	5913
22100 = 6 8 20	2210 = 0 36 50	5666	5915
22200 = 6 10 0	2220 = 0 37 0	5665	5916
22300 = 6 11 40	2230 = 0 37 10	5664	5918
22400 = 6 13 20	2240 = 0 37 20	5663	5919

N.	0	1	2	3	4	5	6	7	8	9
2250	352 1825	2018	2211	2404	2597	2790	2983	3176	3369	3562
51	3755	3948	4141	4334	4527	4720	4912	5105	5298	5491
52	5684	5877	6070	6262	6455	6648	6841	7034	7226	7419
53	7612	7805	7997	8190	8383	8576	8768	8961	9154	9346
54	9539	9732	9924	0̄117	0̄310	0̄502	0̄695	0̄888	1̄080	1̄273
55	353 1465	1658	1851	2043	2236	2428	2621	2813	3006	3198
56	3391	3583	3776	3968	4161	4353	4546	4738	4931	5123
57	5316	5508	5700	5893	6085	6278	6470	6662	6855	7047
58	7239	7432	7624	7816	8009	8201	8393	8586	8778	8970
59	9162	9355	9547	9739	9931	0̄123	0̄316	0̄508	0̄700	0̄892
2260	354 1084	1277	1469	1661	1853	2045	2237	2429	2621	2814
61	3006	3198	3390	3582	3774	3966	4158	4350	4542	4734
62	4926	5118	5310	5502	5694	5886	6078	6270	6462	6654
63	6846	7037	7229	7421	7613	7805	7997	8189	8381	8572
64	8764	8956	9148	9340	9531	9723	9915	0̄107	0̄299	0̄490
65	355 0682	0874	1066	1257	1449	1641	1832	2024	2216	2407
66	2599	2791	2982	3174	3366	3557	3749	3940	4132	4324
67	4515	4707	4898	5090	5281	5473	5664	5856	6048	6239
68	6431	6622	6813	7005	7196	7388	7579	7771	7962	8154
69	8345	8536	8728	8919	9111	9302	9493	9685	9876	0̄067
2270	356 0259	0450	0641	0832	1024	1215	1406	1598	1789	1980
71	2171	2363	2554	2745	2936	3127	3319	3510	3701	3892
72	4083	4274	4466	4657	4848	5039	5230	5421	5612	5803
73	5994	6185	6376	6568	6759	6950	7141	7332	7523	7714
74	7905	8096	8287	8478	8668	8859	9050	9241	9432	9623
75	9814	0̄005	0̄196	0̄387	0̄578	0̄768	0̄959	1̄150	1̄341	1̄532
76	357 1723	1913	2104	2295	2486	2677	2867	3058	3249	3440
77	3630	3821	4012	4202	4393	4584	4775	4965	5156	5347
78	5537	5728	5918	6109	6300	6490	6681	6872	7062	7253
79	7443	7634	7824	8015	8205	8396	8586	8777	8967	9158
2280	9348	9539	9729	9920	0̄110	0̄301	0̄491	0̄682	0̄872	1̄062
81	358 1253	1443	1634	1824	2014	2205	2395	2585	2776	2966
82	3156	3347	3537	3727	3918	4108	4298	4488	4679	4869
83	5059	5249	5440	5630	5820	6010	6200	6391	6581	6771
84	6961	7151	7341	7531	7722	7912	8102	8292	8482	8672
85	8862	9052	9242	9432	9622	9812	0̄002	0̄192	0̄382	0̄572
86	359 0762	0952	1142	1332	1522	1712	1902	2092	2282	2472
87	2662	2852	3041	3231	3421	3611	3801	3991	4181	4370
88	4560	4750	4940	5130	5319	5509	5699	5889	6078	6268
89	6458	6648	6837	7027	7217	7406	7596	7786	7976	8165
2290	8355	8544	8734	8924	9113	9303	9493	9682	9872	0̄061
91	360 0251	0440	0630	0820	1009	1199	1388	1578	1767	1957
92	2146	2336	2525	2715	2904	3093	3283	3472	3662	3851
93	4041	4230	4419	4609	4798	4987	5177	5366	5555	5745
94	5934	6123	6313	6502	6691	6881	7070	7259	7448	7638
95	7827	8016	8205	8395	8584	8773	8962	9151	9341	9530
96	9719	9908	0̄097	0̄286	0̄475	0̄664	0̄854	1̄043	1̄232	1̄421
97	361 1610	1799	1988	2177	2366	2555	2744	2933	3122	3311
98	3500	3689	3878	4067	4256	4445	4634	4823	5012	5201
99	5390	5579	5768	5956	6145	6334	6523	6712	6901	7090
2300	7278	7467	7656	7845	8034	8222	8411	8600	8789	8977
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	193	192
1	19.3	19.2
2	38.6	38.4
3	57.9	57.6
4	77.2	76.8
5	96.5	96.0
6	115.8	115.2
7	135.1	134.4
8	154.4	153.6
9	173.7	172.8

	191	190
1	19.1	19.0
2	38.2	38.0
3	57.3	57.0
4	76.4	76.0
5	95.5	95.0
6	114.6	114.0
7	133.7	133.0
8	152.8	152.0
9	171.9	171.0

	189	188
1	18.9	18.8
2	37.8	37.6
3	56.7	56.4
4	75.6	75.2
5	94.5	94.0
6	113.4	112.8
7	132.3	131.6
8	151.2	150.4
9	170.1	169.2

P. P.

22500″ = 6°15′ 0″ 2250″ = 0°37′ 30″ S. 4.685 5663 T. 5921
22600 = 6 16 40 2260 = 0 37 40 5662 5922
22700 = 6 18 20 2270 = 0 37 50 5661 5924
22800 = 6 20 0 2280 = 0 38 0 5660 5926
22900 = 6 21 40 2290 = 0 38 10 5659 5927

N.	0	1	2	3	4	5	6	7	8	9
2300	361 7278	7467	7656	7845	8034	8222	8411	8600	8789	8977
01	9166	9355	9544	9732	9921	0̄110	0̄298	0̄487	0̄676	0̄865
02	362 1053	1242	1430	1619	1808	1996	2185	2374	2562	2751
03	2939	3128	3317	3505	3694	3882	4071	4259	4448	4636
04	4825	5013	5202	5390	5579	5767	5956	6144	6332	6521
05	6709	6898	7086	7275	7463	7651	7840	8028	8216	8405
06	8593	8781	8970	9158	9346	9535	9723	9911	0̄099	0̄288
07	363 0476	0664	0852	1041	1229	1417	1605	1794	1982	2170
08	2358	2546	2734	2923	3111	3299	3487	3675	3863	4051
09	4239	4427	4615	4804	4992	5180	5368	5556	5744	5932
2310	6120	6308	6496	6684	6872	7060	7248	7436	7624	7812
11	7999	8187	8375	8563	8751	8939	9127	9315	9503	9690
12	9878	0̄066	0̄254	0̄442	0̄630	0̄817	1̄005	1̄193	1̄381	1̄569
13	364 1756	1944	2132	2320	2507	2695	2883	3070	3258	3446
14	3634	3821	4009	4197	4384	4572	4759	4947	5135	5322
15	5510	5698	5885	6073	6260	6448	6635	6823	7010	7198
16	7386	7573	7761	7948	8136	8323	8511	8698	8885	9073
17	9260	9448	9635	9823	0̄010	0̄197	0̄385	0̄572	0̄760	0̄947
18	365 1134	1322	1509	1696	1884	2071	2258	2446	2633	2820
19	3007	3195	3382	3569	3757	3944	4131	4318	4505	4693
2320	4880	5067	5254	5441	5629	5816	6003	6190	6377	6564
21	6751	6939	7126	7313	7500	7687	7874	8061	8248	8435
22	8622	8809	8996	9183	9370	9557	9744	9931	0̄118	0̄305
23	366 0492	0679	0866	1053	1240	1427	1614	1801	1987	2174
24	2361	2548	2735	2922	3109	3296	3482	3669	3856	4043
25	4230	4416	4603	4790	4977	5163	5350	5537	5724	5910
26	6097	6284	6471	6657	6844	7031	7217	7404	7591	7777
27	7964	8150	8337	8524	8710	8897	9083	9270	9457	9643
28	9830	0̄016	0̄203	0̄389	0̄576	0̄762	0̄949	1̄135	1̄322	1̄508
29	367 1695	1881	2068	2254	2441	2627	2814	3000	3186	3373
2330	3559	3746	3932	4118	4305	4491	4677	4864	5050	5236
31	5423	5609	5795	5982	6168	6354	6540	6727	6913	7099
32	7285	7472	7658	7844	8030	8217	8403	8589	8775	8961
33	9147	9334	9520	9706	9892	0̄078	0̄264	0̄450	0̄636	0̄822
34	368 1009	1195	1381	1567	1753	1939	2125	2311	2497	2683
35	2869	3055	3241	3427	3613	3799	3985	4171	4357	4542
36	4728	4914	5100	5286	5472	5658	5844	6030	6215	6401
37	6587	6773	6959	7145	7330	7516	7702	7888	8074	8259
38	8445	8631	8817	9002	9188	9374	9559	9745	9931	0̄117
39	369 0302	0488	0674	0859	1045	1230	1416	1602	1787	1973
2340	2159	2344	2530	2715	2901	3086	3272	3458	3643	3829
41	4014	4200	4385	4571	4756	4942	5127	5313	5498	5683
42	5869	6054	6240	6425	6611	6796	6981	7167	7352	7538
43	7723	7908	8094	8279	8464	8650	8835	9020	9205	9391
44	9576	9761	9947	0̄132	0̄317	0̄502	0̄688	0̄873	1̄058	1̄243
45	370 1428	1614	1799	1984	2169	2354	2540	2725	2910	3095
46	3280	3465	3650	3835	4020	4206	4391	4576	4761	4946
47	5131	5316	5501	5686	5871	6056	6241	6426	6611	6796
48	6981	7166	7351	7536	7721	7906	8091	8275	8460	8645
49	8830	9015	9200	9385	9570	9754	9939	0̄124	0̄309	0̄494
2350	371 0679	0863	1048	1233	1418	1603	1787	1972	2157	2342
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	189	188
1	18.9	18.8
2	37.8	37.6
3	56.7	56.4
4	75.6	75.2
5	94.5	94.0
6	113.4	112.8
7	132.3	131.6
8	151.2	150.4
9	170.1	169.2

	187	186
1	18.7	18.6
2	37.4	37.2
3	56.1	55.8
4	74.8	74.4
5	93.5	93.0
6	112.2	111.6
7	130.9	130.2
8	149.6	148.8
9	168.3	167.4

	185	184
1	18.5	18.4
2	37.0	36.8
3	55.5	55.2
4	74.0	73.6
5	92.5	92.0
6	111.0	110.4
7	129.5	128.8
8	148.0	147.2
9	166.5	165.6

P. P.

23000″ = 6° 23′ 20″ 2300″ = 0° 38′ 20″ S. 4.685 5659 T. 5929
23100 = 6 25 0 2310 = 0 38 30 5658 5930
23200 = 6 26 40 2320 = 0 38 40 5657 5932
23300 = 6 28 20 2330 = 0 38 50 5656 5933
23400 = 6 30 0 2340 = 0 39 0 5656 5935

N.	0	1	2	3	4	5	6	7	8	9
2350	371 0679	0863	1048	1233	1418	1603	1787	1972	2157	2342
51	2526	2711	2896	3080	3265	3450	3635	3819	4004	4189
52	4373	4558	4742	4927	5112	5296	5481	5666	5850	6035
53	6219	6404	6588	6773	6957	7142	7327	7511	7696	7880
54	8065	8249	8434	8618	8802	8987	9171	9356	9540	9725
55	9909	$\bar{0}$094	$\bar{0}$278	$\bar{0}$462	$\bar{0}$647	$\bar{0}$831	$\bar{1}$015	$\bar{1}$200	$\bar{1}$384	$\bar{1}$569
56	372 1753	1937	2122	2306	2490	2674	2859	3043	3227	3412
57	3596	3780	3964	4149	4333	4517	4701	4885	5070	5254
58	5438	5622	5806	5991	6175	6359	6543	6727	6911	7095
59	7279	7464	7648	7832	8016	8200	8384	8568	8752	8936
2360	9120	9304	9488	9672	9856	$\bar{0}$040	$\bar{0}$224	$\bar{0}$408	$\bar{0}$592	$\bar{0}$776
61	373 0960	1144	1328	1512	1696	1879	2063	2247	2431	2615
62	2799	2983	3167	3350	3534	3718	3902	4086	4270	4453
63	4637	4821	5005	5189	5372	5556	5740	5924	6107	6291
64	6475	6658	6842	7026	7210	7393	7577	7761	7944	8128
65	8311	8495	8679	8862	9046	9230	9413	9597	9780	9964
66	374 0147	0331	0515	0698	0882	1065	1249	1432	1616	1799
67	1983	2166	2350	2533	2716	2900	3083	3267	3450	3634
68	3817	4000	4184	4367	4551	4734	4917	5101	5284	5467
69	5651	5834	6017	6201	6384	6567	6750	6934	7117	7300
2370	7483	7667	7850	8033	8216	8400	8583	8766	8949	9132
71	9316	9499	9682	9865	$\bar{0}$048	$\bar{0}$231	$\bar{0}$414	$\bar{0}$598	$\bar{0}$781	$\bar{0}$964
72	375 1147	1330	1513	1696	1879	2062	2245	2428	2611	2794
73	2977	3160	3343	3526	3709	3892	4075	4258	4441	4624
74	4807	4990	5173	5356	5539	5722	5905	6088	6270	6453
75	6636	6819	7002	7185	7368	7550	7733	7916	8099	8282
76	8464	8647	8830	9013	9195	9378	9561	9744	9926	$\bar{0}$109
77	376 0292	0475	0657	0840	1023	1205	1388	1571	1753	1936
78	2119	2301	2484	2666	2849	3032	3214	3397	3579	3762
79	3944	4127	4310	4492	4675	4857	5040	5222	5405	5587
2380	5770	5952	6135	6317	6499	6682	6864	7047	7229	7412
81	7594	7776	7959	8141	8323	8506	8688	8871	9053	9235
82	9418	9600	9782	9965	$\bar{0}$147	$\bar{0}$329	$\bar{0}$511	$\bar{0}$694	$\bar{0}$876	$\bar{1}$058
83	377 1240	1423	1605	1787	1969	2152	2334	2516	2698	2880
84	3063	3245	3427	3609	3791	3973	4155	4338	4520	4702
85	4884	5066	5248	5430	5612	5794	5976	6158	6340	6522
86	6704	6886	7068	7250	7432	7614	7796	7978	8160	8342
87	8524	8706	8888	9070	9252	9434	9616	9798	9979	$\bar{0}$161
88	378 0343	0525	0707	0889	1071	1252	1434	1616	1798	1980
89	2161	2343	2525	2707	2889	3070	3252	3434	3616	3797
2390	3979	4161	4342	4524	4706	4887	5069	5251	5432	5614
91	5796	5977	6159	6341	6522	6704	6885	7067	7249	7430
92	7612	7793	7975	8156	8338	8519	8701	8882	9064	9245
93	9427	9608	9790	9971	$\bar{0}$153	$\bar{0}$334	$\bar{0}$516	$\bar{0}$697	$\bar{0}$879	$\bar{1}$060
94	379 1241	1423	1604	1786	1967	2148	2330	2511	2692	2874
95	3055	3237	3418	3599	3780	3962	4143	4324	4506	4687
96	4868	5049	5231	5412	5593	5774	5956	6137	6318	6499
97	6680	6862	7043	7224	7405	7586	7767	7948	8130	8311
98	8492	8673	8854	9035	9216	9397	9578	9759	9940	$\bar{0}$121
99	380 0302	0484	0665	0846	1027	1208	1389	1570	1750	1931
2400	2112	2293	2474	2655	2836	3017	3198	3379	3560	3741
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	185	184
1	18.5	18.4
2	37.0	36.8
3	55.5	55.2
4	74.0	73.6
5	92.5	92.0
6	111.0	110.4
7	129.5	128.8
8	148.0	147.2
9	166.5	165.6

	183	182
1	18.3	18.2
2	36.6	36.4
3	54.9	54.6
4	73.2	72.8
5	91.5	91.0
6	109.8	109.2
7	128.1	127.4
8	146.4	145.6
9	164.7	163.8

	181	180
1	18.1	18.0
2	36.2	36.0
3	54.3	54.0
4	72.4	72.0
5	90.5	90.0
6	108.6	108.0
7	126.7	126.0
8	144.8	144.0
9	162.9	162.0

P. P.

		S.	T.
23500″ = 6°31′40″	2350″ = 0°39′10″	4.685 5655	5937
23600 = 6 33 20	2360 = 0 39 20	5654	5938
23700 = 6 35 0	2370 = 0 39 30	5653	5940
23800 = 6 36 40	2380 = 0 39 40	5652	5941
23900 = 6 38 20	2390 = 0 39 50	5651	5943

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2400	380 2112	2293	2474	2655	2836	3017	3198	3379	3560	3741	
01	3922	4102	4283	4464	4645	4826	5007	5188	5368	5549	181 1 18.1 2 36.2 3 54.3 4 72.4 5 90.5 6 108.6 7 126.7 8 144.8 9 162.9
02	5730	5911	6092	6272	6453	6634	6815	6995	7176	7357	
03	7538	7718	7899	8080	8261	8441	8622	8803	8983	9164	
04	9345	9525	9706	9887	0̄067	0̄248	0̄428	0̄609	0̄790	0̄970	
05	381 1151	1331	1512	1693	1873	2054	2234	2415	2595	2776	
06	2956	3137	3317	3498	3678	3859	4039	4220	4400	4580	
07	4761	4941	5122	5302	5483	5663	5843	6024	6204	6384	
08	6565	6745	6926	7106	7286	7467	7647	7827	8007	8188	
09	8368	8548	8729	8909	9089	9269	9450	9630	9810	9990	
2410	382 0170	0351	0531	0711	0891	1071	1252	1432	1612	1792	
11	1972	2152	2332	2512	2693	2873	3053	3233	3413	3593	180 1 18.0 2 36.0 3 54.0 4 72.0 5 90.0 6 108.0 7 126.0 8 144.0 9 162.0
12	3773	3953	4133	4313	4493	4673	4853	5033	5213	5393	
13	5573	5753	5933	6113	6293	6473	6653	6833	7013	7193	
14	7373	7553	7732	7912	8092	8272	8452	8632	8812	8992	
15	9171	9351	9531	9711	9891	0̄070	0̄250	0̄430	0̄610	0̄790	
16	383 0969	1149	1329	1509	1688	1868	2048	2227	2407	2587	
17	2767	2946	3126	3306	3485	3665	3844	4024	4204	4383	
18	4563	4743	4922	5102	5281	5461	5640	5820	6000	6179	
19	6359	6538	6718	6897	7077	7256	7436	7615	7795	7974	
2420	8154	8333	8513	8692	8871	9051	9230	9410	9589	9769	
21	9948	0̄127	0̄307	0̄486	0̄665	0̄845	1̄024	1̄203	1̄383	1̄562	179 1 17.9 2 35.8 3 53.7 4 71.6 5 89.5 6 107.4 7 125.3 8 143.2 9 161.1
22	384 1741	1921	2100	2279	2459	2638	2817	2996	3176	3355	
23	3534	3713	3893	4072	4251	4430	4609	4789	4968	5147	
24	5326	5505	5684	5864	6043	6222	6401	6580	6759	6938	
25	7117	7297	7476	7655	7834	8013	8192	8371	8550	8729	
26	8908	9087	9266	9445	9624	9803	9982	0̄161	0̄340	0̄519	
27	385 0698	0877	1056	1235	1413	1592	1771	1950	2129	2308	
28	2487	2666	2845	3023	3202	3381	3560	3739	3918	4096	
29	4275	4454	4633	4812	4990	5169	5348	5527	5705	5884	
2430	6063	6241	6420	6599	6778	6956	7135	7314	7492	7671	
31	7850	8028	8207	8386	8564	8743	8921	9100	9279	9457	178 1 17.8 2 35.6 3 53.4 4 71.2 5 89.0 6 106.8 7 124.6 8 142.4 9 160.2
32	9636	9814	9993	0̄171	0̄350	0̄528	0̄707	0̄886	1̄064	1̄243	
33	386 1421	1600	1778	1957	2135	2314	2492	2670	2849	3027	
34	3206	3384	3563	3741	3919	4098	4276	4455	4633	4811	
35	4990	5168	5346	5525	5703	5881	6060	6238	6416	6595	
36	6773	6951	7129	7308	7486	7664	7842	8021	8199	8377	
37	8555	8733	8912	9090	9268	9446	9624	9803	9981	0̄159	
38	387 0337	0515	0693	0871	1049	1228	1406	1584	1762	1940	
39	2118	2296	2474	2652	2830	3008	3186	3364	3542	3720	
2440	3898	4076	4254	4432	4610	4788	4966	5144	5322	5500	
41	5678	5856	6034	6212	6389	6567	6745	6923	7101	7279	177 1 17.7 2 35.4 3 53.1 4 70.8 5 88.5 6 106.2 7 123.9 8 141.6 9 159.3
42	7457	7634	7812	7990	8168	8346	8524	8701	8879	9057	
43	9235	9412	9590	9768	9946	0̄123	0̄301	0̄479	0̄657	0̄834	
44	388 1012	1190	1367	1545	1723	1900	2078	2256	2433	2611	
45	2789	2966	3144	3321	3499	3677	3854	4032	4209	4387	
46	4565	4742	4920	5097	5275	5452	5630	5807	5985	6162	
47	6340	6517	6695	6872	7050	7227	7404	7582	7759	7937	
48	8114	8292	8469	8646	8824	9001	9178	9356	9533	9711	
49	9888	0̄065	0̄243	0̄420	0̄597	0̄774	0̄952	1̄129	1̄306	1̄484	
2450	389 1661	1838	2015	2193	2370	2547	2724	2902	3079	3256	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

24000″ = 6° 40′ 0″	2400″ = 0° 40′ 0″	S. 4.685 5651	T. 5945
24100 = 6 41 40	2410 = 0 40 10	5650	5946
24200 = 6 43 20	2420 = 0 40 20	5649	5948
24300 = 6 45 0	2430 = 0 40 30	5648	5950
24400 = 6 46 40	2440 = 0 40 40	5647	5951

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2450	389 1661	1838	2015	2193	2370	2547	2724	2902	3079	3256	
51	3433	3610	3787	3965	4142	4319	4496	4673	4850	5028	177
52	5205	5382	5559	5736	5913	6090	6267	6444	6621	6798	1 17.7
53	6975	7153	7330	7507	7684	7861	8038	8215	8392	8569	2 35.4
54	8746	8923	9100	9276	9453	9630	9807	9984	0̄161	0̄338	3 53.1
55	390 0515	0692	0869	1046	1223	1399	1576	1753	1930	2107	4 70.8
56	2284	2460	2637	2814	2991	3168	3344	3521	3698	3875	5 88.5 6 106.2
57	4052	4228	4405	4582	4759	4935	5112	5289	5465	5642	7 123.9
58	5819	5995	6172	6349	6525	6702	6879	7055	7232	7409	8 141.6
59	7585	7762	7939	8115	8292	8468	8645	8821	8998	9175	9 159.3
2460	9351	9528	9704	9881	0̄057	0̄234	0̄410	0̄587	0̄763	0̄940	
61	391 1116	1293	1469	1646	1822	1998	2175	2351	2528	2704	176
62	2880	3057	3233	3410	3586	3762	3939	4115	4291	4468	1 17.6
63	4644	4820	4997	5173	5349	5526	5702	5878	6055	6231	2 35.2
64	6407	6583	6760	6936	7112	7288	7464	7641	7817	7993	3 52.8
65	8169	8345	8522	8698	8874	9050	9226	9402	9578	9755	4 70.4
66	9931	0̄107	0̄283	0̄459	0̄635	0̄811	0̄987	1̄163	1̄339	1̄515	5 88.0 6 105.6
67	392 1691	1868	2044	2220	2396	2572	2748	2924	3100	3276	7 123.2
68	3452	3628	3803	3979	4155	4331	4507	4683	4859	5035	8 140.8
69	5211	5387	5563	5739	5914	6090	6266	6442	6618	6794	9 158.4
2470	6970	7145	7321	7497	7673	7849	8024	8200	8376	8552	
71	8727	8903	9079	9255	9430	9606	9782	9958	0̄133	0̄309	175
72	393 0485	0660	0836	1012	1187	1363	1539	1714	1890	2066	1 17.5
73	2241	2417	2592	2768	2944	3119	3295	3470	3646	3821	2 35.0
74	3997	4172	4348	4524	4699	4875	5050	5226	5401	5577	3 52.5
75	5752	5928	6103	6278	6454	6629	6805	6980	7156	7331	4 70.0
76	7506	7682	7857	8033	8208	8383	8559	8734	8909	9085	5 87.5 6 105.0
77	9260	9435	9611	9786	9961	0̄137	0̄312	0̄487	0̄662	0̄838	7 122.5
78	394 1013	1188	1364	1539	1714	1889	2064	2240	2415	2590	8 140.0
79	2765	2940	3116	3291	3466	3641	3816	3991	4167	4342	9 157.5
2480	4517	4692	4867	5042	5217	5392	5567	5742	5918	6093	
81	6268	6443	6618	6793	6968	7143	7318	7493	7668	7843	174
82	8018	8193	8368	8543	8718	8893	9068	9242	9417	9592	1 17.4
83	9767	9942	0̄117	0̄292	0̄467	0̄642	0̄817	0̄991	1̄166	1̄341	2 34.8
84	395 1516	1691	1866	2040	2215	2390	2565	2740	2914	3089	3 52.2
85	3264	3439	3613	3788	3963	4138	4312	4487	4662	4837	4 69.6
86	5011	5186	5361	5535	5710	5885	6059	6234	6409	6583	5 87.0 6 104.4
87	6758	6932	7107	7282	7456	7631	7805	7980	8155	8329	7 121.8
88	8504	8678	8853	9027	9202	9376	9551	9725	9900	0̄074	8 139.2
89	396 0249	0423	0598	0772	0947	1121	1296	1470	1645	1819	9 156.6
2490	1993	2168	2342	2517	2691	2865	3040	3214	3389	3563	
91	3737	3912	4086	4260	4435	4609	4783	4958	5132	5306	173
92	5480	5655	5829	6003	6177	6352	6526	6700	6874	7049	1 17.3
93	7223	7397	7571	7745	7920	8094	8268	8442	8616	8790	2 34.6
94	8964	9139	9313	9487	9661	9835	0̄009	0̄183	0̄357	0̄531	3 51.9
95	397 0705	0880	1054	1228	1402	1576	1750	1924	2098	2272	4 69.2
96	2446	2620	2794	2968	3142	3316	3490	3664	3838	4011	5 86.5 6 103.8
97	4185	4359	4533	4707	4881	5055	5229	5403	5577	5750	7 121.1
98	5924	6098	6272	6446	6620	6794	6967	7141	7315	7489	8 138.4
99	7663	7836	8010	8184	8358	8531	8705	8879	9053	9226	9 155.7
2500	9400	9574	9748	9921	0̄095	0̄269	0̄442	0̄616	0̄790	0̄963	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

24500″ = 6° 48′ 20″ 2450″ = 0° 40′ 50″ S. 4.685 5647 T. 5953
24600 = 6 50 0 2460 = 0 41 0 5646 5955
24700 = 6 51 40 2470 = 0 41 10 5645 5956
24800 = 6 53 20 2480 = 0 41 20 5644 5958
24900 = 6 55 0 2490 = 0 41 30 5643 5960

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2500	397 9400	9574	9748	9921	0̄095	0̄269	0̄442	0̄616	0̄790	0̄963	
01	398 1137	1311	1484	1658	1831	2005	2179	2352	2526	2699	
02	2873	3047	3220	3394	3567	3741	3914	4088	4261	4435	
03	4608	4782	4956	5129	5302	5476	5649	5823	5996	6170	
04	6343	6517	6690	6864	7037	7210	7384	7557	7731	7904	
05	8077	8251	8424	8597	8771	8944	9117	9291	9464	9637	
06	9811	9984	0̄157	0̄331	0̄504	0̄677	0̄850	1̄024	1̄197	1̄370	
07	399 1543	1717	1890	2063	2236	2409	2583	2756	2929	3102	
08	3275	3448	3622	3795	3968	4141	4314	4487	4660	4834	
09	5007	5180	5353	5526	5699	5872	6045	6218	6391	6564	
2510	6737	6910	7083	7256	7429	7602	7775	7948	8121	8294	
11	8467	8640	8813	8986	9159	9332	9505	9678	9851	0̄023	
12	400 0196	0369	0542	0715	0888	1061	1234	1406	1579	1752	
13	1925	2098	2271	2443	2616	2789	2962	3134	3307	3480	
14	3653	3825	3998	4171	4344	4516	4689	4862	5035	5207	
15	5380	5553	5725	5898	6071	6243	6416	6588	6761	6934	
16	7106	7279	7452	7624	7797	7969	8142	8314	8487	8660	
17	8832	9005	9177	9350	9522	9695	9867	0̄040	0̄212	0̄385	
18	401 0557	0730	0902	1075	1247	1420	1592	1764	1937	2109	
19	2282	2454	2626	2799	2971	3144	3316	3488	3661	3833	
2520	4005	4178	4350	4522	4695	4867	5039	5212	5384	5556	
21	5728	5901	6073	6245	6417	6590	6762	6934	7106	7279	
22	7451	7623	7795	7967	8140	8312	8484	8656	8828	9000	
23	9173	9345	9517	9689	9861	0̄033	0̄205	0̄377	0̄549	0̄721	
24	402 0894	1066	1238	1410	1582	1754	1926	2098	2270	2442	
25	2614	2786	2958	3130	3302	3474	3646	3818	3990	4162	
26	4333	4505	4677	4849	5021	5193	5365	5537	5709	5881	
27	6052	6224	6396	6568	6740	6912	7083	7255	7427	7599	
28	7771	7942	8114	8286	8458	8630	8801	8973	9145	9317	
29	9488	9660	9832	0̄003	0̄175	0̄347	0̄519	0̄690	0̄862	1̄034	
2530	403 1205	1377	1549	1720	1892	2063	2235	2407	2578	2750	
31	2921	3093	3265	3436	3608	3779	3951	4122	4294	4465	
32	4637	4809	4980	5152	5323	5495	5666	5838	6009	6180	
33	6352	6523	6695	6866	7038	7209	7381	7552	7723	7895	
34	8066	8237	8409	8580	8752	8923	9094	9266	9437	9608	
35	9780	9951	0̄122	0̄294	0̄465	0̄636	0̄807	0̄979	1̄150	1̄321	
36	404 1492	1664	1835	2006	2177	2349	2520	2691	2862	3033	
37	3205	3376	3547	3718	3889	4061	4232	4403	4574	4745	
38	4916	5087	5258	5429	5601	5772	5943	6114	6285	6456	
39	6627	6798	6969	7140	7311	7482	7653	7824	7995	8166	
2540	8337	8508	8679	8850	9021	9192	9363	9534	9705	9876	
41	405 0047	0218	0388	0559	0730	0901	1072	1243	1414	1585	
42	1755	1926	2097	2268	2439	2610	2780	2951	3122	3293	
43	3464	3634	3805	3976	4147	4317	4488	4659	4830	5000	
44	5171	5342	5512	5683	5854	6025	6195	6366	6537	6707	
45	6878	7049	7219	7390	7560	7731	7902	8072	8243	8413	
46	8584	8755	8925	9096	9266	9437	9607	9778	9948	0̄119	
47	406 0289	0460	0630	0801	0971	1142	1312	1483	1653	1824	
48	1994	2165	2335	2506	2676	2846	3017	3187	3358	3528	
49	3698	3869	4039	4209	4380	4550	4721	4891	5061	5231	
2550	5402	5572	5742	5913	6083	6253	6424	6594	6764	6934	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

P. P.	174	173	172	171	170
1	17.4	17.3	17.2	17.1	17.0
2	34.8	34.6	34.4	34.2	34.0
3	52.2	51.9	51.6	51.3	51.0
4	69.6	69.2	68.8	68.4	68.0
5	87.0	86.5	86.0	85.5	85.0
6	104.4	103.8	103.2	102.6	102.0
7	121.8	121.1	120.4	119.7	119.0
8	139.2	138.4	137.6	136.8	136.0
9	156.6	155.7	154.8	153.9	153.0

25000″ = 6°56′40″   2500″ = 0°41′40″   S. 4.685 5642   T. 5961
25100 = 6 58 20   2510 = 0 41 50   5641   5963
25200 = 7 0 0   2520 = 0 42 0   5641   5965
25300 = 7 1 40   2530 = 0 42 10   5640   5966
25400 = 7 3 20   2540 = 0 42 20   5639   5968

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2550	406 5402	5572	5742	5913	6083	6253	6424	6594	6764	6934	
51	7105	7275	7445	7615	7786	7956	8126	8296	8466	8637	171
52	8807	8977	9147	9317	9487	9658	9828	9998	0̄168	0̄338	1 17.1
53	407 0508	0678	0848	1018	1189	1359	1529	1699	1869	2039	2 34.2
54	2209	2379	2549	2719	2889	3059	3229	3399	3569	3739	3 51.3 4 68.4
55	3909	4079	4249	4419	4589	4759	4929	5099	5269	5439	5 85.5
56	5608	5778	5948	6118	6288	6458	6628	6798	6968	7137	6 102.6
57	7307	7477	7647	7817	7987	8156	8326	8496	8666	8836	7 119.7
58	9005	9175	9345	9515	9684	9854	0̄024	0̄194	0̄363	0̄533	8 136.8
59	408 0703	0873	1042	1212	1382	1551	1721	1891	2060	2230	9 153.9
2560	2400	2569	2739	2909	3078	3248	3417	3587	3757	3926	
61	4096	4265	4435	4604	4774	4944	5113	5283	5452	5622	170
62	5791	5961	6130	6300	6469	6639	6808	6978	7147	7317	1 17.0
63	7486	7656	7825	7994	8164	8333	8503	8672	8841	9011	2 34.0
64	9180	9350	9519	9688	9858	0̄027	0̄196	0̄366	0̄535	0̄704	3 51.0 4 68.0
65	409 0874	1043	1212	1382	1551	1720	1889	2059	2228	2397	5 85.0
66	2567	2736	2905	3074	3243	3413	3582	3751	3920	4089	6 102.0
67	4259	4428	4597	4766	4935	5105	5274	5443	5612	5781	7 119.0
68	5950	6119	6288	6458	6627	6796	6965	7134	7303	7472	8 136.0
69	7641	7810	7979	8148	8317	8486	8655	8824	8993	9162	9 153.0
2570	9331	9500	9669	9838	0̄007	0̄176	0̄345	0̄514	0̄683	0̄852	
71	410 1021	1190	1359	1527	1696	1865	2034	2203	2372	2541	169
72	2710	2878	3047	3216	3385	3554	3723	3891	4060	4229	1 16.9
73	4398	4567	4735	4904	5073	5242	5410	5579	5748	5917	2 33.8
74	6085	6254	6423	6592	6760	6929	7098	7266	7435	7604	3 50.7 4 67.6
75	7772	7941	8110	8278	8447	8616	8784	8953	9121	9290	5 84 5
76	9459	9627	9796	9964	0̄133	0̄301	0̄470	0̄639	0̄807	0̄976	6 101.4
77	411 1144	1313	1481	1650	1818	1987	2155	2324	2492	2661	7 118.3
78	2829	2998	3166	3334	3503	3671	3840	4008	4177	4345	8 135.2
79	4513	4682	4850	5019	5187	5355	5524	5692	5860	6029	9 152.1
2580	6197	6365	6534	6702	6870	7039	7207	7375	7544	7712	
81	7880	8048	8217	8385	8553	8721	8890	9058	9226	9394	168
82	9562	9731	9899	0̄067	0̄235	0̄403	0̄571	0̄740	0̄908	1̄076	1 16.8
83	412 1244	1412	1580	1748	1917	2085	2253	2421	2589	2757	2 33.6
84	2925	3093	3261	3429	3597	3765	3933	4101	4269	4437	3 50.4 4 67.2
85	4605	4773	4941	5109	5277	5445	5613	5781	5949	6117	5 84.0
86	6285	6453	6621	6789	6957	7125	7293	7461	7629	7796	6 100.8
87	7964	8132	8300	8468	8636	8804	8971	9139	9307	9475	7 117.6
88	9643	9811	9978	0̄146	0̄314	0̄482	0̄649	0̄817	0̄985	1̄153	8 134.4
89	413 1321	1488	1656	1824	1991	2159	2327	2495	2662	2830	9 151.2
2590	2998	3165	3333	3501	3668	3836	4004	4171	4339	4507	
91	4674	4842	5009	5177	5345	5512	5680	5847	6015	6182	167
92	6350	6518	6685	6853	7020	7188	7355	7523	7690	7858	1 16.7
93	8025	8193	8360	8528	8695	8863	9030	9197	9365	9532	2 33.4
94	9700	9867	0̄035	0̄202	0̄369	0̄537	0̄704	0̄872	1̄039	1̄206	3 50.1 4 66.8
95	414 1374	1541	1708	1876	2043	2210	2378	2545	2712	2880	5 83.5
96	3047	3214	3381	3549	3716	3883	4051	4218	4385	4552	6 100.2
97	4719	4887	5054	5221	5388	5556	5723	5890	6057	6224	7 116.9
98	6391	6559	6726	6893	7060	7227	7394	7561	7729	7896	8 133.6
99	8063	8230	8397	8564	8731	8898	9065	9232	9399	9566	9 150.3
2600	9733	9901	0̄068	0̄235	0̄402	0̄569	0̄736	0̄903	1̄070	1̄237	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

25500″ = 7° 5′ 0″	2550′ = 0° 42′ 30″	S. 4.685 5638	T. 5970
25600 = 7 6 40	2560 = 0 42 40	5637	5972
25700 = 7 8 20	2570 = 0 42 50	5636	5973
25800 = 7 10 0	2580 = 0 43 0	5635	5975
25900 = 7 11 40	2590 = 0 43 10	5635	5977

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2600	414 9733	9901	$\bar{0}068$	$\bar{0}235$	$\bar{0}402$	$\bar{0}569$	$\bar{0}736$	$\bar{0}903$	$\bar{1}070$	$\bar{1}237$	
01	415 1404	1570	1737	1904	2071	2238	2405	2572	2739	2906	168 1 16.8 2 33.6 3 50.4 4 67.2 5 84.0 6 100.8 7 117.6 8 134.4 9 151.2
02	3073	3240	3407	3574	3741	3907	4074	4241	4408	4575	
03	4742	4909	5075	5242	5409	5576	5743	5909	6076	6243	
04	6410	6577	6743	6910	7077	7244	7410	7577	7744	7911	
05	8077	8244	8411	8577	8744	8911	9077	9244	9411	9577	
06	9744	9911	$\bar{0}077$	$\bar{0}244$	$\bar{0}411$	$\bar{0}577$	$\bar{0}744$	$\bar{0}911$	$\bar{1}077$	$\bar{1}244$	
07	416 1410	1577	1743	1910	2077	2243	2410	2576	2743	2909	
08	3076	3242	3409	3575	3742	3908	4075	4241	4408	4574	
09	4741	4907	5074	5240	5407	5573	5739	5906	6072	6239	
2610	6405	6571	6738	6904	7071	7237	7403	7570	7736	7902	
11	8069	8235	8401	8568	8734	8900	9067	9233	9399	9565	167 1 16.7 2 33.4 3 50.1 4 66.8 5 83.5 6 100.2 7 116.9 8 133.6 9 150.3
12	9732	9898	$\bar{0}064$	$\bar{0}231$	$\bar{0}397$	$\bar{0}563$	$\bar{0}729$	$\bar{0}895$	$\bar{1}062$	$\bar{1}228$	
13	417 1394	1560	1726	1893	2059	2225	2391	2557	2724	2890	
14	3056	3222	3388	3554	3720	3886	4053	4219	4385	4551	
15	4717	4883	5049	5215	5381	5547	5713	5879	6045	6211	
16	6377	6543	6709	6875	7041	7207	7373	7539	7705	7871	
17	8037	8203	8369	8535	8701	8867	9033	9199	9365	9531	
18	9696	9862	$\bar{0}028$	$\bar{0}194$	$\bar{0}360$	$\bar{0}526$	$\bar{0}692$	$\bar{0}857$	$\bar{1}023$	$\bar{1}189$	
19	418 1355	1521	1687	1852	2018	2184	2350	2516	2681	2847	
2620	3013	3179	3344	3510	3676	3842	4007	4173	4339	4505	
21	4670	4836	5002	5167	5333	5499	5664	5830	5996	6161	166 1 16.6 2 33.2 3 49.8 4 66.4 5 83.0 6 99.6 7 116.2 8 132.8 9 149.4
22	6327	6493	6658	6824	6989	7155	7321	7486	7652	7817	
23	7983	8148	8314	8480	8645	8811	8976	9142	9307	9473	
24	9638	9804	9969	$\bar{0}135$	$\bar{0}300$	$\bar{0}466$	$\bar{0}631$	$\bar{0}797$	$\bar{0}962$	$\bar{1}128$	
25	419 1293	1459	1624	1789	1955	2120	2286	2451	2616	2782	
26	2947	3113	3278	3443	3609	3774	3939	4105	4270	4435	
27	4601	4766	4931	5097	5262	5427	5593	5758	5923	6088	
28	6254	6419	6584	6749	6915	7080	7245	7410	7575	7741	
29	7906	8071	8236	8401	8567	8732	8897	9062	9227	9392	
2630	9557	9723	9888	$\bar{0}053$	$\bar{0}218$	$\bar{0}383$	$\bar{0}548$	$\bar{0}713$	$\bar{0}878$	$\bar{1}043$	
31	420 1208	1374	1539	1704	1869	2034	2199	2364	2529	2694	165 1 16.5 2 33.0 3 49.5 4 66.0 5 82.5 6 99.0 7 115.5 8 132.0 9 148.5
32	2859	3024	3189	3354	3519	3684	3849	4014	4179	4344	
33	4509	4674	4838	5003	5168	5333	5498	5663	5828	5993	
34	6158	6323	6487	6652	6817	6982	7147	7312	7477	7641	
35	7806	7971	8136	8301	8465	8630	8795	8960	9125	9289	
36	9454	9619	9784	9948	$\bar{0}113$	$\bar{0}278$	$\bar{0}442$	$\bar{0}607$	$\bar{0}772$	$\bar{0}937$	
37	421 1101	1266	1431	1595	1760	1925	2089	2254	2419	2583	
38	2748	2913	3077	3242	3406	3571	3736	3900	4065	4229	
39	4394	4558	4723	4888	5052	5217	5381	5546	5710	5875	
2640	6039	6204	6368	6533	6697	6862	7026	7191	7355	7520	
41	7684	7848	8013	8177	8342	8506	8671	8835	8999	9164	164 1 16.4 2 32.8 3 49.2 4 65.6 5 82.0 6 98.4 7 114.8 8 131.2 9 147.6
42	9328	9493	9657	9821	9986	$\bar{0}150$	$\bar{0}314$	$\bar{0}479$	$\bar{0}643$	$\bar{0}807$	
43	422 0972	1136	1300	1465	1629	1793	1957	2122	2286	2450	
44	2615	2779	2943	3107	3271	3436	3600	3764	3928	4093	
45	4257	4421	4585	4749	4913	5078	5242	5406	5570	5734	
46	5898	6063	6227	6391	6555	6719	6883	7047	7211	7375	
47	7539	7703	7868	8032	8196	8360	8524	8688	8852	9016	
48	9180	9344	9508	9672	9836	$\bar{0}000$	$\bar{0}164$	$\bar{0}328$	$\bar{0}492$	$\bar{0}656$	
49	423 0820	0984	1147	1311	1475	1639	1803	1967	2131	2295	
2650	2459	2623	2786	2950	3114	3278	3442	3606	3770	3933	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

26000″ = 7° 13′ 20″ 2600″ = 0° 43′ 20″ S. 4.685 5634 T. 5979
26100 = 7 15 0 2610 = 0 43 30 5633 5980
26200 = 7 16 40 2620 = 0 43 40 5632 5982
26300 = 7 18 20 2630 = 0 43 50 5631 5984
26400 = 7 20 0 2640 = 0 44 0 5630 5986

N.	0	1	2	3	4	5	6	7	8	9	P. P.	
2650	423 2459	2623	2786	2950	3114	3278	3442	3606	3770	3933		
51	4097	4261	4425	4589	4753	4916	5080	5244	5408	5571		164
52	5735	5899	6063	6226	6390	6554	6718	6881	7045	7209	1	16.4
53	7372	7536	7700	7864	8027	8191	8355	8518	8682	8846	2	32.8
54	9009	9173	9336	9500	9664	9827	9991	0̄154	0̄318	0̄482	3	49.2
55	424 0645	0809	0972	1136	1300	1463	1627	1790	1954	2117	4	65.6
56	2281	2444	2608	2771	2935	3098	3262	3425	3589	3752	5 6	82.0 98.4
57	3916	4079	4242	4406	4569	4733	4896	5060	5223	5386	7	114.8
58	5550	5713	5877	6040	6203	6367	6530	6693	6857	7020	8	131.2
59	7183	7347	7510	7673	7837	8000	8163	8327	8490	8653	9	147.6
2660	8816	8980	9143	9306	9469	9633	9796	9959	0̄122	0̄286		
61	425 0449	0612	0775	0938	1102	1265	1428	1591	1754	1917		163
62	2081	2244	2407	2570	2733	2896	3059	3222	3385	3549	1	16.3
63	3712	3875	4038	4201	4364	4527	4690	4853	5016	5179	2	32.6
64	5342	5505	5668	5831	5994	6157	6320	6483	6646	6809	3	48.9
65	6972	7135	7298	7461	7624	7787	7950	8113	8276	8439	4	65.2
66	8601	8764	8927	9090	9253	9416	9579	9742	9904	0̄067	5 6	81.5 97.8
67	426 0230	0393	0556	0719	0881	1044	1207	1370	1533	1695	7	114.1
68	1858	2021	2184	2347	2509	2672	2835	2998	3160	3323	8	130.4
69	3486	3648	3811	3974	4137	4299	4462	4625	4787	4950	9	146.7
2670	5113	5275	5438	5601	5763	5926	6088	6251	6414	6576		
71	6739	6901	7064	7227	7389	7552	7714	7877	8039	8202		162
72	8365	8527	8690	8852	9015	9177	9340	9502	9665	9827	1	16.2
73	9990	0̄152	0̄315	0̄477	0̄639	0̄802	0̄964	1̄127	1̄289	1̄452	2	32.4
74	427 1614	1776	1939	2101	2264	2426	2588	2751	2913	3076	3	48.6
75	3238	3400	3563	3725	3887	4050	4212	4374	4536	4699	4	64.8
76	4861	5023	5186	5348	5510	5672	5835	5997	6159	6321	5 6	81.0 97.2
77	6484	6646	6808	6970	7133	7295	7457	7619	7781	7944	7	113.4
78	8106	8268	8430	8592	8754	8917	9079	9241	9403	9565	8	129.6
79	9727	9889	0̄051	0̄213	0̄376	0̄538	0̄700	0̄862	1̄024	1̄186	9	145.8
2680	428 1348	1510	1672	1834	1996	2158	2320	2482	2644	2806		
81	2968	3130	3292	3454	3616	3778	3940	4102	4264	4426		161
82	4588	4750	4912	5073	5235	5397	5559	5721	5883	6045	1	16.1
83	6207	6369	6530	6692	6854	7016	7178	7340	7501	7663	2	32.2
84	7825	7987	8149	8311	8472	8634	8796	8958	9119	9281	3	48.3
85	9443	9605	9766	9928	0̄090	0̄252	0̄413	0̄575	0̄737	0̄898	4	64.4
86	429 1060	1222	1383	1545	1707	1868	2030	2192	2353	2515	5 6	80.5 96.6
87	2677	2838	3000	3162	3323	3485	3646	3808	3969	4131	7	112.7
88	4293	4454	4616	4777	4939	5100	5262	5423	5585	5747	8	128.8
89	5908	6070	6231	6393	6554	6715	6877	7038	7200	7361	9	144.9
2690	7523	7684	7846	8007	8169	8330	8491	8653	8814	8976		
91	9137	9298	9460	9621	9782	9944	0̄105	0̄267	0̄428	0̄589		160
92	430 0751	0912	1073	1235	1396	1557	1718	1880	2041	2202	1	16.0
93	2364	2525	2686	2847	3009	3170	3331	3492	3653	3815	2	32.0
94	3976	4137	4298	4460	4621	4782	4943	5104	5265	5427	3	48.0
95	5588	5749	5910	6071	6232	6393	6554	6716	6877	7038	4	64.0
96	7199	7360	7521	7682	7843	8004	8165	8326	8487	8648	5 6	80.0 96.0
97	8809	8970	9132	9293	9454	9615	9776	9937	0̄098	0̄258	7	112.0
98	431 0419	0580	0741	0902	1063	1224	1385	1546	1707	1868	8	128.0
99	2029	2190	2351	2512	2672	2833	2994	3155	3316	3477	9	144.0
2700	3638	3798	3959	4120	4281	4442	4603	4763	4924	5085		
N.	0	1	2	3	4	5	6	7	8	9	P. P.	

26500″ = 7° 21′ 40″ 2650″ = 0° 44′ 10″ S. 4.685 5629 T. 5988
26600 = 7 23 20 2660 = 0 44 20 5628 5989
26700 = 7 25 0 2670 = 0 44 30 5627 5991
26800 = 7 26 40 2680 = 0 44 40 5626 5993
26900 = 7 28 20 2690 = 0 44 50 5626 5995

N.	0	1	2	3	4	5	6	7	8	9
2700	431 3638	3798	3959	4120	4281	4442	4603	4763	4924	5085
01	5246	5407	5567	5728	5889	6050	6210	6371	6532	6693
02	6853	7014	7175	7336	7496	7657	7818	7978	8139	8300
03	8460	8621	8782	8942	9103	9264	9424	9585	9746	9906
04	432 0067	0227	0388	0549	0709	0870	1030	1191	1352	1512
05	1673	1833	1994	2154	2315	2475	2636	2796	2957	3117
06	3278	3438	3599	3759	3920	4080	4241	4401	4562	4722
07	4883	5043	5203	5364	5524	5685	5845	6005	6166	6326
08	6487	6647	6807	6968	7128	7288	7449	7609	7769	7930
09	8090	8250	8411	8571	8731	8892	9052	9212	9372	9533
2710	9693	9853	0̄013	0̄174	0̄334	0̄494	0̄654	0̄815	0̄975	1̄135
11	433 1295	1455	1616	1776	1936	2096	2256	2416	2577	2737
12	2897	3057	3217	3377	3537	3697	3858	4018	4178	4338
13	4498	4658	4818	4978	5138	5298	5458	5618	5778	5938
14	6098	6258	6418	6578	6738	6898	7058	7218	7378	7538
15	7698	7858	8018	8178	8338	8498	8658	8818	8978	9138
16	9298	9458	9617	9777	9937	0̄097	0̄257	0̄417	0̄577	0̄737
17	434 0896	1056	1216	1376	1536	1696	1855	2015	2175	2335
18	2495	2654	2814	2974	3134	3293	3453	3613	3773	3932
19	4092	4252	4412	4571	4731	4891	5050	5210	5370	5529
2720	5689	5849	6008	6168	6328	6487	6647	6807	6966	7126
21	7285	7445	7605	7764	7924	8083	8243	8403	8562	8722
22	8881	9041	9200	9360	9519	9679	9838	9998	0̄157	0̄317
23	435 0476	0636	0795	0955	1114	1274	1433	1593	1752	1912
24	2071	2230	2390	2549	2709	2868	3028	3187	3346	3506
25	3665	3824	3984	4143	4303	4462	4621	4781	4940	5099
26	5259	5418	5577	5736	5896	6055	6214	6374	6533	6692
27	6851	7011	7170	7329	7488	7648	7807	7966	8125	8284
28	8444	8603	8762	8921	9080	9240	9399	9558	9717	9876
29	436 0035	0194	0354	0513	0672	0831	0990	1149	1308	1467
2730	1626	1786	1945	2104	2263	2422	2581	2740	2899	3058
31	3217	3376	3535	3694	3853	4012	4171	4330	4489	4648
32	4807	4966	5125	5284	5443	5602	5761	5920	6078	6237
33	6396	6555	6714	6873	7032	7191	7350	7509	7667	7826
34	7985	8144	8303	8462	8620	8779	8938	9097	9256	9415
35	9573	9732	9891	0̄050	0̄208	0̄367	0̄526	0̄685	0̄843	1̄002
36	437 1161	1320	1478	1637	1796	1955	2113	2272	2431	2589
37	2748	2907	3065	3224	3383	3541	3700	3859	4017	4176
38	4334	4493	4652	4810	4969	5127	5286	5445	5603	5762
39	5920	6079	6237	6396	6555	6713	6872	7030	7189	7347
2740	7506	7664	7823	7981	8140	8298	8457	8615	8773	8932
41	9090	9249	9407	9566	9724	9883	0̄041	0̄199	0̄358	0̄516
42	438 0675	0833	0991	1150	1308	1466	1625	1783	1941	2100
43	2258	2416	2575	2733	2891	3050	3208	3366	3525	3683
44	3841	3999	4158	4316	4474	4632	4791	4949	5107	5265
45	5423	5582	5740	5898	6056	6214	6373	6531	6689	6847
46	7005	7163	7322	7480	7638	7796	7954	8112	8270	8428
47	8587	8745	8903	9061	9219	9377	9535	9693	9851	0̄009
48	439 0167	0325	0483	0641	0799	0957	1115	1273	1431	1589
49	1747	1905	2063	2221	2379	2537	2695	2853	3011	3169
2750	3327	3485	3643	3801	3959	4116	4274	4432	4590	4748
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	161
1	16.1
2	32.2
3	48.3
4	64.4
5	80.5
6	96.6
7	112.7
8	128.8
9	144.9

	160
1	16.0
2	32.0
3	48.0
4	64.0
5	80.0
6	96.0
7	112.0
8	128.0
9	144.0

	159
1	15.9
2	31.8
3	47.7
4	63.6
5	79.5
6	95.4
7	111.3
8	127.2
9	143.1

	158
1	15.8
2	31.6
3	47.4
4	63.2
5	79.0
6	94.8
7	110.6
8	126.4
9	142.2

P. P.

27000″ = 7° 30′ 0″ 2700″ = 0° 45′ 0″ S. 4.685 5625 T. 5997
27100 = 7 31 40 2710 = 0 45 10 5624 5999
27200 = 7 33 20 2720 = 0 45 20 5623 6000
27300 = 7 35 0 2730 = 0 45 30 5622 6002
27400 = 7 36 40 2740 = 0 45 40 5621 6004

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2750	439 3327	3485	3643	3801	3959	4116	4274	4432	4590	4748	
51	4906	5064	5222	5379	5537	5695	5853	6011	6169	6326	
52	6484	6642	6800	6958	7115	7273	7431	7589	7747	7904	
53	8062	8220	8378	8535	8693	8851	9009	9166	9324	9482	158
54	9639	9797	9955	$\bar{0}112$	$\bar{0}270$	$\bar{0}428$	$\bar{0}585$	$\bar{0}743$	$\bar{0}901$	$\bar{1}058$	1 15.8
55	440 1216	1374	1531	1689	1847	2004	2162	2319	2477	2635	2 31.6
56	2792	2950	3107	3265	3422	3580	3738	3895	4053	4210	3 47.4
57	4368	4525	4683	4840	4998	5155	5313	5470	5628	5785	4 63.2 5 79.0
58	5943	6100	6258	6415	6572	6730	6887	7045	7202	7360	6 94.8
59	7517	7674	7832	7989	8147	8304	8461	8619	8776	8933	7 110.6
2760	9091	9248	9406	9563	9720	9878	$\bar{0}035$	$\bar{0}192$	$\bar{0}349$	$\bar{0}507$	8 126.4
61	441 0664	0821	0979	1136	1293	1450	1608	1765	1922	2080	9 142.2
62	2237	2394	2551	2708	2866	3023	3180	3337	3494	3652	
63	3809	3966	4123	4280	4438	4595	4752	4909	5066	5223	
64	5380	5538	5695	5852	6009	6166	6323	6480	6637	6794	
65	6951	7108	7265	7423	7580	7737	7894	8051	8208	8365	157
66	8522	8679	8836	8993	9150	9307	9464	9621	9778	9935	1 15.7
67	442 0092	0249	0405	0562	0719	0876	1033	1190	1347	1504	2 31.4
68	1661	1818	1975	2132	2288	2445	2602	2759	2916	3073	3 47.1
69	3230	3386	3543	3700	3857	4014	4171	4327	4484	4641	4 62.8
2770	4798	4954	5111	5268	5425	5582	5738	5895	6052	6209	5 78.5 6 94.2
71	6365	6522	6679	6835	6992	7149	7306	7462	7619	7776	7 109.9
72	7932	8089	8246	8402	8559	8716	8872	9029	9185	9342	8 125.6
73	9499	9655	9812	9969	$\bar{0}125$	$\bar{0}282$	$\bar{0}438$	$\bar{0}595$	$\bar{0}751$	$\bar{0}908$	9 141.3
74	443 1065	1221	1378	1534	1691	1847	2004	2160	2317	2473	
75	2630	2786	2943	3099	3256	3412	3569	3725	3882	4038	
76	4195	4351	4507	4664	4820	4977	5133	5290	5446	5602	
77	5759	5915	6072	6228	6384	6541	6697	6853	7010	7166	156
78	7322	7479	7635	7791	7948	8104	8260	8417	8573	8729	1 15.6
79	8885	9042	9198	9354	9511	9667	9823	9979	$\bar{0}136$	$\bar{0}292$	2 31.2
2780	444 0448	0604	0760	0917	1073	1229	1385	1541	1698	1854	3 46.8 4 62.4
81	2010	2166	2322	2478	2635	2791	2947	3103	3259	3415	5 78.0
82	3571	3727	3883	4040	4196	4352	4508	4664	4820	4976	6 93.6
83	5132	5288	5444	5600	5756	5912	6068	6224	6380	6536	7 109.2
84	6692	6848	7004	7160	7316	7472	7628	7784	7940	8096	8 124.8
85	8252	8408	8564	8720	8876	9032	9188	9343	9499	9655	9 140.4
86	9811	9967	$\bar{0}123$	$\bar{0}279$	$\bar{0}435$	$\bar{0}590$	$\bar{0}746$	$\bar{0}902$	$\bar{1}058$	$\bar{1}214$	
87	445 1370	1526	1681	1837	1993	2149	2305	2460	2616	2772	
88	2928	3083	3239	3395	3551	3706	3862	4018	4174	4329	
89	4485	4641	4797	4952	5108	5264	5419	5575	5731	5886	155
2790	6042	6198	6353	6509	6665	6820	6976	7132	7287	7443	1 15.5
91	7598	7754	7910	8065	8221	8376	8532	8687	8843	8999	2 31.0
92	9154	9310	9465	9621	9776	9932	$\bar{0}087$	$\bar{0}243$	$\bar{0}398$	$\bar{0}554$	3 46.5
93	446 0709	0865	1020	1176	1331	1487	1642	1798	1953	2109	4 62.0
94	2264	2419	2575	2730	2886	3041	3197	3352	3507	3663	5 77.5
95	3818	3974	4129	4284	4440	4595	4750	4906	5061	5216	6 93.0 7 108.5
96	5372	5527	5682	5838	5993	6148	6304	6459	6614	6769	8 124.0
97	6925	7080	7235	7390	7546	7701	7856	8011	8167	8322	9 139.5
98	8477	8632	8788	8943	9098	9253	9408	9563	9719	9874	
99	447 0029	0184	0339	0494	0650	0805	0960	1115	1270	1425	
2800	1580	1735	1891	2046	2201	2356	2511	2666	2821	2976	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

27500″ = 7° 38′ 20″ 2750′ = 0° 45′ 50″ S. 4.685 5620 T. 6006
27600 = 7 40 0 2760 = 0 46 0 " 5619 " 6008
27700 = 7 41 40 2770 = 0 46 10 " 5618 " 6010
27800 = 7 43 20 2780 = 0 46 20 " 5617 " 6012
27900 = 7 45 0 2790 = 0 46 30 " 5616 " 6014

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2800	447 1580	1735	1891	2046	2201	2356	2511	2666	2821	2976	
01	3131	3286	3441	3596	3751	3906	4061	4216	4371	4526	
02	4681	4836	4991	5146	5301	5456	5611	5766	5921	6076	
03	6231	6386	6541	6696	6851	7006	7161	7315	7470	7625	156 1 15.6 2 31.2 3 46.8 4 62.4 5 78.0 6 93.6 7 109.2 8 124.8 9 140.4
04	7780	7935	8090	8245	8400	8554	8709	8864	9019	9174	
05	9329	9483	9638	9793	9948	$\bar{0}$103	$\bar{0}$258	$\bar{0}$412	$\bar{0}$567	$\bar{0}$722	
06	448 0877	1031	1186	1341	1496	1650	1805	1960	2115	2269	
07	2424	2579	2734	2888	3043	3198	3352	3507	3662	3816	
08	3971	4126	4280	4435	4590	4744	4899	5054	5208	5363	
09	5517	5672	5827	5981	6136	6290	6445	6600	6754	6909	
2810	7063	7218	7372	7527	7681	7836	7990	8145	8299	8454	
11	8608	8763	8917	9072	9226	9381	9535	9690	9844	9999	
12	449 0153	0308	0462	0616	0771	0925	1080	1234	1389	1543	
13	1697	1852	2006	2160	2315	2469	2624	2778	2932	3087	
14	3241	3395	3550	3704	3858	4013	4167	4321	4475	4630	
15	4784	4938	5093	5247	5401	5555	5710	5864	6018	6172	155 1 15.5 2 31.0 3 46.5 4 62.0 5 77.5 6 93.0 7 108.5 8 124.0 9 139.5
16	6327	6481	6635	6789	6943	7098	7252	7406	7560	7714	
17	7868	8023	8177	8331	8485	8639	8793	8948	9102	9256	
18	9410	9564	9718	9872	$\bar{0}$026	$\bar{0}$180	$\bar{0}$334	$\bar{0}$489	$\bar{0}$643	$\bar{0}$797	
19	450 0951	1105	1259	1413	1567	1721	1875	2029	2183	2337	
2820	2491	2645	2799	2953	3107	3261	3415	3569	3723	3877	
21	4031	4185	4339	4493	4647	4801	4954	5108	5262	5416	
22	5570	5724	5878	6032	6186	6340	6493	6647	6801	6955	
23	7109	7263	7416	7570	7724	7878	8032	8186	8339	8493	
24	8647	8801	8954	9108	9262	9416	9570	9723	9877	$\bar{0}$031	
25	451 0185	0338	0492	0646	0799	0953	1107	1261	1414	1568	
26	1722	1875	2029	2183	2336	2490	2644	2797	2951	3104	
27	3258	3412	3565	3719	3873	4026	4180	4333	4487	4640	151 1 15.4 2 30.8 3 46.2 4 61.6 5 77.0 6 92.4 7 107.8 8 123.2 9 138.6
28	4794	4948	5101	5255	5408	5562	5715	5869	6022	6176	
29	6329	6483	6636	6790	6943	7097	7250	7404	7557	7711	
2830	7864	8018	8171	8325	8478	8632	8785	8938	9092	9245	
31	9399	9552	9705	9859	$\bar{0}$012	$\bar{0}$166	$\bar{0}$319	$\bar{0}$472	$\bar{0}$626	$\bar{0}$779	
32	452 0932	1086	1239	1393	1546	1699	1853	2006	2159	2312	
33	2466	2619	2772	2926	3079	3232	3385	3539	3692	3845	
34	3998	4152	4305	4458	4611	4765	4918	5071	5224	5377	
35	5531	5684	5837	5990	6143	6297	6450	6603	6756	6909	
36	7062	7215	7369	7522	7675	7828	7981	8134	8287	8440	
37	8593	8746	8900	9053	9206	9359	9512	9665	9818	9971	
38	453 0124	0277	0430	0583	0736	0889	1042	1195	1348	1501	
39	1654	1807	1960	2113	2266	2419	2572	2725	2878	3030	153 1 15.3 2 30.6 3 45.9 4 61.2 5 76.5 6 91.8 7 107.1 8 122.4 9 137.7
2840	3183	3336	3489	3642	3795	3948	4101	4254	4407	4559	
41	4712	4865	5018	5171	5324	5477	5629	5782	5935	6088	
42	6241	6394	6546	6699	6852	7005	7158	7310	7463	7616	
43	7769	7921	8074	8227	8380	8532	8685	8838	8990	9143	
44	9296	9449	9601	9754	9907	$\bar{0}$059	$\bar{0}$212	$\bar{0}$365	$\bar{0}$517	$\bar{0}$670	
45	454 0823	0975	1128	1281	1433	1586	1739	1891	2044	2196	
46	2349	2502	2654	2807	2959	3112	3264	3417	3570	3722	
47	3875	4027	4180	4332	4485	4637	4790	4942	5095	5247	
48	5400	5552	5705	5857	6010	6162	6315	6467	6620	6772	
49	6924	7077	7229	7382	7534	7687	7839	7991	8144	8296	
2850	8449	8601	8753	8906	9058	9210	9363	9515	9668	9820	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

28000″ = 7°46′40″	2800″ = 0°46′40″	S. 4.685 5615	T. 6015
28100 = 7 48 20	2810 = 0 46 50	5614	6017
28200 = 7 50 0	2820 = 0 47 0	5613	6019
28300 = 7 51 40	2830 = 0 47 10	5612	6021
28400 = 7 53 20	2840 = 0 47 20	5611	6023

N.	0	1	2	3	4	5	6	7	8	9
2850	454 8449	8601	8753	8906	9058	9210	9363	9515	9668	9820
51	9972	0̄125	0̄277	0̄429	0̄581	0̄734	0̄886	1̄038	1̄191	1̄343
52	455 1495	1647	1800	1952	2104	2257	2409	2561	2713	2865
53	3018	3170	3322	3474	3627	3779	3931	4083	4235	4388
54	4540	4692	4844	4996	5148	5300	5453	5605	5757	5909
55	6061	6213	6365	6517	6670	6822	6974	7126	7278	7430
56	7582	7734	7886	8038	8190	8342	8494	8646	8798	8950
57	9102	9254	9406	9558	9710	9862	0̄014	0̄166	0̄318	0̄470
58	456 0622	0774	0926	1078	1230	1382	1534	1686	1838	1990
59	2142	2293	2445	2597	2749	2901	3053	3205	3357	3508
2860	3660	3812	3964	4116	4268	4420	4571	4723	4875	5027
61	5179	5330	5482	5634	5786	5938	6089	6241	6393	6545
62	6696	6848	7000	7152	7303	7455	7607	7758	7910	8062
63	8213	8365	8517	8669	8820	8972	9124	9275	9427	9578
64	9730	9882	0̄033	0̄185	0̄337	0̄488	0̄640	0̄791	0̄943	1̄095
65	457 1246	1398	1549	1701	1853	2004	2156	2307	2459	2610
66	2762	2913	3065	3216	3368	3519	3671	3822	3974	4125
67	4277	4428	4580	4731	4883	5034	5186	5337	5489	5640
68	5791	5943	6094	6246	6397	6549	6700	6851	7003	7154
69	7305	7457	7608	7760	7911	8062	8214	8365	8516	8668
2870	8819	8970	9122	9273	9424	9576	9727	9878	0̄029	0̄181
71	458 0332	0483	0634	0786	0937	1088	1239	1391	1542	1693
72	1844	1996	2147	2298	2449	2600	2752	2903	3054	3205
73	3356	3507	3659	3810	3961	4112	4263	4414	4565	4717
74	4868	5019	5170	5321	5472	5623	5774	5925	6076	6227
75	6378	6530	6681	6832	6983	7134	7285	7436	7587	7738
76	7889	8040	8191	8342	8493	8644	8795	8946	9097	9248
77	9399	9550	9701	9851	0̄002	0̄153	0̄304	0̄455	0̄606	0̄757
78	459 0908	1059	1210	1361	1511	1662	1813	1964	2115	2266
79	2417	2567	2718	2869	3020	3171	3322	3472	3623	3774
2880	3925	4076	4226	4377	4528	4679	4830	4980	5131	5282
81	5433	5583	5734	5885	6036	6186	6337	6488	6638	6789
82	6940	7090	7241	7392	7542	7693	7844	7994	8145	8296
83	8446	8597	8748	8898	9049	9200	9350	9501	9651	9802
84	9953	0̄103	0̄254	0̄404	0̄555	0̄705	0̄856	1̄007	1̄157	1̄308
85	460 1458	1609	1759	1910	2060	2211	2361	2512	2662	2813
86	2963	3114	3264	3415	3565	3716	3866	4017	4167	4317
87	4468	4618	4769	4919	5070	5220	5370	5521	5671	5822
88	5972	6122	6273	6423	6573	6724	6874	7024	7175	7325
89	7475	7626	7776	7926	8077	8227	8377	8528	8678	8828
2890	8978	9129	9279	9429	9579	9730	9880	0̄030	0̄180	0̄331
91	461 0481	0631	0781	0932	1082	1232	1382	1532	1683	1833
92	1983	2133	2283	2433	2584	2734	2884	3034	3184	3334
93	3484	3634	3785	3935	4085	4235	4385	4535	4685	4835
94	4985	5135	5285	5435	5585	5736	5886	6036	6186	6336
95	6486	6636	6786	6936	7086	7236	7386	7536	7686	7836
96	7986	8136	8285	8435	8585	8735	8885	9035	9185	9335
97	9485	9635	9785	9935	0̄085	0̄234	0̄384	0̄534	0̄684	0̄834
98	462 0984	1134	1284	1433	1583	1733	1883	2033	2183	2332
99	2482	2632	2782	2932	3081	3231	3381	3531	3680	3830
2900	3980	4130	4279	4429	4579	4729	4878	5028	5178	5328
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	152
1	15.2
2	30.4
3	45.6
4	60.8
5	76.0
6	91.2
7	106.4
8	121.6
9	136.8

	151
1	15.1
2	30.2
3	45.3
4	60.4
5	75.5
6	90.6
7	105.7
8	120.8
9	135.9

	150
1	15.0
2	30.0
3	45.0
4	60.0
5	75.0
6	90.0
7	105.0
8	120.0
9	135.0

	149
1	14.9
2	29.8
3	44.7
4	59.6
5	74.5
6	89.4
7	104.3
8	119.2
9	134.1

P. P.

28500″ = 7° 55′ 0″ 2850″ = 0° 47′ 30″ S. 4.685 5610 T. 6025
28600 = 7 56 40 2860 = 0 47 40 5610 6027
28700 = 7 58 20 2870 = 0 47 50 5609 6029
28800 = 8 0 0 2880 = 0 48 0 5608 6031
28900 = 8 1 40 2890 = 0 48 10 5607 6033

N.	0	1	2	3	4	5	6	7	8	9	P. P.
2900	462 3980	4130	4279	4429	4579	4729	4878	5028	5178	5328	
01	5477	5627	5777	5926	6076	6226	6375	6525	6675	6824	
02	6974	7124	7273	7423	7573	7722	7872	8022	8171	8321	
03	8470	8620	8770	8919	9069	9218	9368	9517	9667	9817	150 1 15.0 2 30.0 3 45.0 4 60.0 5 75.0 6 90.0 7 105.0 8 120.0 9 135.0
04	9966	0̄116	0̄265	0̄415	0̄564	0̄714	0̄863	1̄013	1̄162	1̄312	
05	463 1461	1611	1760	1910	2059	2209	2358	2508	2657	2807	
06	2956	3106	3255	3404	3554	3703	3853	4002	4152	4301	
07	4450	4600	4749	4898	5048	5197	5347	5496	5645	5795	
08	5944	6093	6243	6392	6541	6691	6840	6989	7139	7288	
09	7437	7587	7736	7885	8034	8184	8333	8482	8631	8781	
2910	8930	9079	9228	9378	9527	9676	9825	9974	0̄124	0̄273	
11	464 0422	0571	0720	0870	1019	1168	1317	1466	1615	1765	
12	1914	2063	2212	2361	2510	2659	2808	2958	3107	3256	
13	3405	3554	3703	3852	4001	4150	4299	4448	4597	4746	
14	4895	5045	5194	5343	5492	5641	5790	5939	6088	6237	
15	6386	6535	6684	6833	6981	7130	7279	7428	7577	7726	149 1 14.9 2 29.8 3 44.7 4 59.6 5 74.5 6 89.4 7 104.3 8 119.2 9 134.1
16	7875	8024	8173	8322	8471	8620	8769	8918	9067	9215	
17	9364	9513	9662	9811	9960	0̄109	0̄258	0̄406	0̄555	0̄704	
18	465 0853	1002	1151	1299	1448	1597	1746	1895	2043	2192	
19	2341	2490	2639	2787	2936	3085	3234	3382	3531	3680	
2920	3829	3977	4126	4275	4423	4572	4721	4870	5018	5167	
21	5316	5464	5613	5762	5910	6059	6208	6356	6505	6653	
22	6802	6951	7099	7248	7397	7545	7694	7842	7991	8140	
23	8288	8437	8585	8734	8882	9031	9180	9328	9477	9625	
24	9774	9922	0̄071	0̄219	0̄368	0̄516	0̄665	0̄813	0̄962	1̄110	
25	466 1259	1407	1556	1704	1853	2001	2149	2298	2446	2595	
26	2743	2892	3040	3188	3337	3485	3634	3782	3930	4079	
27	4227	4376	4524	4672	4821	4969	5117	5266	5414	5562	148 1 14.8 2 29.6 3 44.4 4 59.2 5 74.0 6 88.8 7 103.6 8 118.4 9 133.2
28	5711	5859	6007	6156	6304	6452	6601	6749	6897	7045	
29	7194	7342	7490	7639	7787	7935	8083	8232	8380	8528	
2930	8676	8824	8973	9121	9269	9417	9565	9714	9862	0̄010	
31	467 0158	0306	0455	0603	0751	0899	1047	1195	1343	1492	
32	1640	1788	1936	2084	2232	2380	2528	2676	2824	2973	
33	3121	3269	3417	3565	3713	3861	4009	4157	4305	4453	
34	4601	4749	4897	5045	5193	5341	5489	5637	5785	5933	
35	6081	6229	6377	6525	6673	6821	6969	7117	7265	7413	
36	7561	7708	7856	8004	8152	8300	8448	8596	8744	8892	
37	9039	9187	9335	9483	9631	9779	9927	0̄074	0̄222	0̄370	
38	468 0518	0666	0814	0961	1109	1257	1405	1553	1700	1848	
39	1996	2144	2291	2439	2587	2735	2882	3030	3178	3326	147 1 14.7 2 29.4 3 44.1 4 58.8 5 73.5 6 88.2 7 102.9 8 117.6 9 132.3
2940	3473	3621	3769	3916	4064	4212	4360	4507	4655	4803	
41	4950	5098	5246	5393	5541	5689	5836	5984	6131	6279	
42	6427	6574	6722	6870	7017	7165	7312	7460	7607	7755	
43	7903	8050	8198	8345	8493	8640	8788	8935	9083	9231	
44	9378	9526	9673	9821	9968	0̄116	0̄263	0̄411	0̄558	0̄706	
45	469 0853	1000	1148	1295	1443	1590	1738	1885	2033	2180	
46	2327	2475	2622	2770	2917	3064	3212	3359	3507	3654	
47	3801	3949	4096	4243	4391	4538	4685	4833	4980	5127	
48	5275	5422	5569	5717	5864	6011	6159	6306	6453	6600	
49	6748	6895	7042	7190	7337	7484	7631	7778	7926	8073	
2950	8220	8367	8515	8662	8809	8956	9103	9251	9398	9545	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

29000″ = 8° 3′ 20″ 2900″ = 0° 48′ 20″ S. 4.685 5606 T. 6035
29100 = 8 5 0 2910 = 0 48 30 5605 6037
29200 = 8 6 40 2920 = 0 48 40 5604 6039
29300 = 8 8 20 2930 = 0 48 50 5603 6041
29400 = 8 10 0 2940 = 0 49 0 5602 6043

N.	0	1	2	3	4	5	6	7	8	9
2950	469 8220	8367	8515	8662	8809	8956	9103	9251	9398	9545
51	9692	9839	9986	0̄134	0̄281	0̄428	0̄575	0̄722	0̄869	1̄016
52	470 1164	1311	1458	1605	1752	1899	2046	2193	2340	2487
53	2634	2782	2929	3076	3223	3370	3517	3664	3811	3958
54	4105	4252	4399	4546	4693	4840	4987	5134	5281	5428
55	5575	5722	5869	6016	6163	6310	6457	6604	6750	6897
56	7044	7191	7338	7485	7632	7779	7926	8073	8219	8366
57	8513	8660	8807	8954	9101	9248	9394	9541	9688	9835
58	9982	0̄129	0̄275	0̄422	0̄569	0̄716	0̄863	1̄009	1̄156	1̄303
59	471 1450	1596	1743	1890	2037	2183	2330	2477	2624	2770
2960	2917	3064	3211	3357	3504	3651	3797	3944	4091	4237
61	4384	4531	4677	4824	4971	5117	5264	5411	5557	5704
62	5851	5997	6144	6290	6437	6584	6730	6877	7023	7170
63	7317	7463	7610	7756	7903	8049	8196	8342	8489	8635
64	8782	8929	9075	9222	9368	9515	9661	9808	9954	0̄101
65	472 0247	0393	0540	0686	0833	0979	1126	1272	1419	1565
66	1711	1858	2004	2151	2297	2444	2590	2736	2883	3029
67	3175	3322	3468	3615	3761	3907	4054	4200	4346	4493
68	4639	4785	4932	5078	5224	5371	5517	5663	5809	5956
69	6102	6248	6395	6541	6687	6833	6980	7126	7272	7418
2970	7564	7711	7857	8003	8149	8296	8442	8588	8734	8880
71	9027	9173	9319	9465	9611	9757	9903	0̄050	0̄196	0̄342
72	473 0488	0634	0780	0926	1073	1219	1365	1511	1657	1803
73	1949	2095	2241	2387	2533	2679	2825	2972	3118	3264
74	3410	3556	3702	3848	3994	4140	4286	4432	4578	4724
75	4870	5016	5162	5308	5454	5600	5746	5891	6037	6183
76	6329	6475	6621	6767	6913	7059	7205	7351	7497	7642
77	7788	7934	8080	8226	8372	8518	8664	8809	8955	9101
78	9247	9393	9539	9684	9830	9976	0̄122	0̄268	0̄413	0̄559
79	474 0705	0851	0997	1142	1288	1434	1580	1725	1871	2017
2980	2163	2308	2454	2600	2746	2891	3037	3183	3328	3474
81	3620	3765	3911	4057	4202	4348	4494	4639	4785	4931
82	5076	5222	5368	5513	5659	5805	5950	6096	6241	6387
83	6533	6678	6824	6969	7115	7260	7406	7552	7697	7843
84	7988	8134	8279	8425	8570	8716	8861	9007	9152	9298
85	9443	9589	9734	9880	0̄025	0̄171	0̄316	0̄462	0̄607	0̄753
86	475 0898	1043	1189	1334	1480	1625	1771	1916	2061	2207
87	2352	2498	2643	2788	2934	3079	3225	3370	3515	3661
88	3806	3951	4097	4242	4387	4533	4678	4823	4969	5114
89	5259	5404	5550	5695	5840	5986	6131	6276	6421	6567
2990	6712	6857	7002	7148	7293	7438	7583	7729	7874	8019
91	8164	8309	8455	8600	8745	8890	9035	9180	9326	9471
92	9616	9761	9906	0̄051	0̄196	0̄342	0̄487	0̄632	0̄777	0̄922
93	476 1067	1212	1357	1502	1648	1793	1938	2083	2228	2373
94	2518	2663	2808	2953	3098	3243	3388	3533	3678	3823
95	3968	4113	4258	4403	4548	4693	4838	4983	5128	5273
96	5418	5563	5708	5853	5998	6143	6288	6433	6578	6723
97	6867	7012	7157	7302	7447	7592	7737	7882	8027	8171
98	8316	8461	8606	8751	8896	9041	9185	9330	9475	9620
99	9765	9909	0̄054	0̄199	0̄344	0̄489	0̄633	0̄778	0̄923	1̄068
3000	477 1213	1357	1502	1647	1792	1936	2081	2226	2371	2515
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	147
1	14.7
2	29.4
3	44.1
4	58.8
5	73.5
6	88.2
7	102.9
8	117.6
9	132.3

	146
1	14.6
2	29.2
3	43.8
4	58.4
5	73.0
6	87.6
7	102.2
8	116.8
9	131.4

	145
1	14.5
2	29.0
3	43.5
4	58.0
5	72.5
6	87.0
7	101.5
8	116.0
9	130.5

	144
1	14.4
2	28.8
3	43.2
4	57.6
5	72.0
6	86.4
7	100.8
8	115.2
9	129.6

P. P.

29500″ = 8° 11′ 40″ 2950″ = 0° 49′ 10″ S. 4.685 5601 T. 6045
29600 = 8 13 20 2960 = 0 49 20 5600 6047
29700 = 8 15 0 2970 = 0 49 30 5599 6049
29800 = 8 16 40 2980 = 0 49 40 5598 6051
29900 = 8 18 20 2990 = 0 49 50 5597 6053

N.	0	1	2	3	4	5	6	7	8	9
3000	477 1213	1357	1502	1647	1792	1936	2081	2226	2371	2515
01	2660	2805	2949	3094	3239	3383	3528	3673	3818	3962
02	4107	4252	4396	4541	4686	4830	4975	5119	5264	5409
03	5553	5698	5843	5987	6132	6276	6421	6566	6710	6855
04	6999	7144	7288	7433	7578	7722	7867	8011	8156	8300
05	8445	8589	8734	8878	9023	9167	9312	9456	9601	9745
06	9890	0̄034	0̄179	0̄323	0̄468	0̄612	0̄757	0̄901	1̄045	1̄190
07	478 1334	1479	1623	1768	1912	2056	2201	2345	2490	2634
08	2778	2923	3067	3211	3356	3500	3645	3789	3933	4078
09	4222	4366	4511	4655	4799	4943	5088	5232	5376	5521
3010	478 5665	5809	5954	6098	6242	6386	6531	6675	6819	6963
11	7108	7252	7396	7540	7684	7829	7973	8117	8261	8405
12	8550	8694	8838	8982	9126	9271	9415	9559	9703	9847
13	9991	0̄135	0̄280	0̄424	0̄568	0̄712	0̄856	1̄000	1̄144	1̄288
14	479 1432	1577	1721	1865	2009	2153	2297	2441	2585	2729
15	2873	3017	3161	3305	3449	3593	3737	3881	4025	4169
16	4313	4457	4601	4745	4889	5033	5177	5321	5465	5609
17	5753	5897	6041	6185	6329	6473	6617	6761	6905	7048
18	7192	7336	7480	7624	7768	7912	8056	8200	8343	8487
19	8631	8775	8919	9063	9207	9350	9494	9638	9782	9926
3020	480 0069	0213	0357	0501	0645	0788	0932	1076	1220	1363
21	1507	1651	1795	1939	2082	2226	2370	2513	2657	2801
22	2945	3088	3232	3376	3519	3663	3807	3950	4094	4238
23	4381	4525	4669	4812	4956	5100	5243	5387	5531	5674
24	5818	5961	6105	6249	6392	6536	6679	6823	6967	7110
25	7254	7397	7541	7684	7828	7972	8115	8259	8402	8546
26	8689	8833	8976	9120	9263	9407	9550	9694	9837	9981
27	481 0124	0268	0411	0555	0698	0842	0985	1128	1272	1415
28	1559	1702	1846	1989	2132	2276	2419	2563	2706	2849
29	2993	3136	3279	3423	3566	3710	3853	3996	4140	4283
3030	481 4426	4570	4713	4856	5000	5143	5286	5429	5573	5716
31	5859	6003	6146	6289	6432	6576	6719	6862	7005	7149
32	7292	7435	7578	7722	7865	8008	8151	8295	8438	8581
33	8724	8867	9010	9154	9297	9440	9583	9726	9869	0̄013
34	482 0156	0299	0442	0585	0728	0871	1015	1158	1301	1444
35	1587	1730	1873	2016	2159	2302	2445	2589	2732	2875
36	3018	3161	3304	3447	3590	3733	3876	4019	4162	4305
37	4448	4591	4734	4877	5020	5163	5306	5449	5592	5735
38	5878	6021	6164	6307	6449	6592	6735	6878	7021	7164
39	7307	7450	7593	7736	7879	8021	8164	8307	8450	8593
3040	482 8736	8879	9022	9164	9307	9450	9593	9736	9879	0̄021
41	483 0164	0307	0450	0593	0735	0878	1021	1164	1307	1449
42	1592	1735	1878	2020	2163	2306	2449	2591	2734	2877
43	3020	3162	3305	3448	3590	3733	3876	4018	4161	4304
44	4446	4589	4732	4874	5017	5160	5302	5445	5588	5730
45	5873	6016	6158	6301	6443	6586	6729	6871	7014	7156
46	7299	7442	7584	7727	7869	8012	8154	8297	8439	8582
47	8725	8867	9010	9152	9295	9437	9580	9722	9865	0̄007
48	484 0150	0292	0435	0577	0720	0862	1004	1147	1289	1432
49	1574	1717	1859	2002	2144	2286	2429	2571	2714	2856
3050	484 2998	3141	3283	3426	3568	3710	3853	3995	4137	4280
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	145
1	14.5
2	29.0
3	43.5
4	58.0
5	72.5
6	87.0
7	101.5
8	116.0
9	130.5

	144
1	14.4
2	28.8
3	43.2
4	57.6
5	72.0
6	86.4
7	100.8
8	115.2
9	129.6

	143
1	14.3
2	28.6
3	42.9
4	57.2
5	71.5
6	85.8
7	100.1
8	114.4
9	128.7

	142
1	14.2
2	28.4
3	42.6
4	56.8
5	71.0
6	85.2
7	99.4
8	113.6
9	127.8

		S.	T.
30000″ = 8° 20′ 0″	3000″ = 0° 50′ 0″	4.685 5596	6055
30100 = 8 21 40	3010 = 0 50 10	5595	6057
30200 = 8 23 20	3020 = 0 50 20	5594	6059
30300 = 8 25 0	3030 = 0 50 30	5592	6061
30400 = 8 26 40	3040 = 0 50 40	5591	6063

N.	0	1	2	3	4	5	6	7	8	9
3050	484 2998	3141	3283	3426	3568	3710	3853	3995	4137	4280
51	4422	4564	4707	4849	4991	5134	5276	5418	5561	5703
52	5845	5988	6130	6272	6414	6557	6699	6841	6984	7126
53	7268	7410	7553	7695	7837	7979	8121	8264	8406	8548
54	8690	8833	8975	9117	9259	9401	9543	9686	9828	9970
55	485 0112	0254	0396	0539	0681	0823	0965	1107	1249	1391
56	1533	1676	1818	1960	2102	2244	2386	2528	2670	2812
57	2954	3096	3239	3381	3523	3665	3807	3949	4091	4233
58	4375	4517	4659	4801	4943	5085	5227	5369	5511	5653
59	5795	5937	6079	6221	6363	6505	6647	6788	6930	7072
3060	485 7214	7356	7498	7640	7782	7924	8066	8208	8350	8491
61	8633	8775	8917	9059	9201	9343	9484	9626	9768	9910
62	486 0052	0194	0336	0477	0619	0761	0903	1045	1186	1328
63	1470	1612	1754	1895	2037	2179	2321	2462	2604	2746
64	2888	3029	3171	3313	3455	3596	3738	3880	4021	4163
65	4305	4446	4588	4730	4872	5013	5155	5297	5438	5580
66	5722	5863	6005	6146	6288	6430	6571	6713	6855	6996
67	7138	7279	7421	7563	7704	7846	7987	8129	8270	8412
68	8554	8695	8837	8978	9120	9261	9403	9544	9686	9827
69	9969	0̄110	0̄252	0̄393	0̄535	0̄676	0̄818	0̄959	1̄101	1̄242
3070	487 1384	1525	1667	1808	1950	2091	2232	2374	2515	2657
71	2798	2940	3081	3222	3364	3505	3647	3788	3929	4071
72	4212	4353	4495	4636	4778	4919	5060	5202	5343	5484
73	5626	5767	5908	6050	6191	6332	6473	6615	6756	6897
74	7039	7180	7321	7462	7604	7745	7886	8027	8169	8310
75	8451	8592	8734	8875	9016	9157	9299	9440	9581	9722
76	9863	0̄004	0̄146	0̄287	0̄428	0̄569	0̄710	0̄852	0̄993	1̄134
77	488 1275	1416	1557	1698	1839	1981	2122	2263	2404	2545
78	2686	2827	2968	3109	3251	3392	3533	3674	3815	3956
79	4097	4238	4379	4520	4661	4802	4943	5084	5225	5366
3080	488 5507	5648	5789	5930	6071	6212	6353	6494	6635	6776
81	6917	7058	7199	7340	7481	7622	7763	7904	8045	8185
82	8326	8467	8608	8749	8890	9031	9172	9313	9454	9594
83	9735	9876	0̄017	0̄158	0̄299	0̄440	0̄580	0̄721	0̄862	1̄003
84	489 1144	1285	1425	1566	1707	1848	1989	2129	2270	2411
85	2552	2692	2833	2974	3115	3256	3396	3537	3678	3818
86	3959	4100	4241	4381	4522	4663	4804	4944	5085	5226
87	5366	5507	5648	5788	5929	6070	6210	6351	6492	6632
88	6773	6914	7054	7195	7335	7476	7617	7757	7898	8038
89	8179	8320	8460	8601	8741	8882	9023	9163	9304	9444
3090	489 9585	9725	9866	0̄006	0̄147	0̄287	0̄428	0̄569	0̄709	0̄850
91	490 0990	1131	1271	1412	1552	1693	1833	1973	2114	2254
92	2395	2535	2676	2816	2957	3097	3238	3378	3518	3659
93	3799	3940	4080	4220	4361	4501	4642	4782	4922	5063
94	5203	5343	5484	5624	5765	5905	6045	6186	6326	6466
95	6607	6747	6887	7027	7168	7308	7448	7589	7729	7869
96	8010	8150	8290	8430	8571	8711	8851	8991	9132	9272
97	9412	9552	9693	9833	9973	0̄113	0̄253	0̄394	0̄534	0̄674
98	491 0814	0954	1094	1235	1375	1515	1655	1795	1935	2076
99	2216	2356	2496	2636	2776	2916	3057	3197	3337	3477
3100	491 3617	3757	3897	4037	4177	4317	4457	4597	4738	4878
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	143
1	14.3
2	28.6
3	42.9
4	57.2
5	71.5
6	85.8
7	100.1
8	114.4
9	128.7

	142
1	14.2
2	28.4
3	42.6
4	56.8
5	71.0
6	85.2
7	99.4
8	113.6
9	127.8

	141
1	14.1
2	28.2
3	42.3
4	56.4
5	70.5
6	84.6
7	98.7
8	112.8
9	126.9

	140
1	14.0
2	28.0
3	42.0
4	56.0
5	70.0
6	84.0
7	98.0
8	112.0
9	126.0

30500″ = 8° 28′ 20″ 3050″ = 0° 50′ 50″ S. 4.685 5590 T. 6065
30600 = 8 30 0 3060 = 0 51 0 5589 6067
30700 = 8 31 40 3070 = 0 51 10 5588 6069
30800 = 8 33 20 3080 = 0 51 20 5587 6071
30900 = 8 35 0 3090 = 0 51 30 5586 6074

N.	0	1	2	3	4	5	6	7	8	9	P. P.
3100	491 3617	3757	3897	4037	4177	4317	4457	4597	4738	4878	
01	5018	5158	5298	5438	5578	5718	5858	5998	6138	6278	
02	6418	6558	6698	6838	6978	7118	7258	7398	7538	7678	
03	7818	7958	8098	8238	8378	8517	8657	8797	8937	9077	141 1 14.1 2 28.2 3 42.3 4 56.4 5 70.5 6 84.6 7 98.7 8 112.8 9 126.9
04	9217	9357	9497	9637	9777	9917	0̄057	0̄196	0̄336	0̄476	
05	492 0616	0756	0896	1036	1175	1315	1455	1595	1735	1875	
06	2015	2154	2294	2434	2574	2714	2853	2993	3133	3273	
07	3413	3552	3692	3832	3972	4111	4251	4391	4531	4670	
08	4810	4950	5090	5229	5369	5509	5648	5788	5928	6068	
09	6207	6347	6487	6626	6766	6906	7045	7185	7325	7464	
3110	492 7604	7744	7883	8023	8162	8302	8442	8581	8721	8861	
11	9000	9140	9279	9419	9558	9698	9838	9977	0̄117	0̄256	
12	493 0396	0535	0675	0815	0954	1094	1233	1373	1512	1652	
13	1791	1931	2070	2210	2349	2489	2628	2768	2907	3047	
14	3186	3326	3465	3604	3744	3883	4023	4162	4302	4441	
15	4581	4720	4859	4999	5138	5278	5417	5556	5696	5835	140 1 14.0 2 28.0 3 42.0 4 56.0 5 70.0 6 84.0 7 98.0 8 112.0 9 126.0
16	5974	6114	6253	6393	6532	6671	6811	6950	7089	7229	
17	7368	7507	7647	7786	7925	8065	8204	8343	8483	8622	
18	8761	8900	9040	9179	9318	9457	9597	9736	9875	0̄015	
19	494 0154	0293	0432	0571	0711	0850	0989	1128	1268	1407	
3120	494 1546	1685	1824	1964	2103	2242	2381	2520	2659	2799	
21	2938	3077	3216	3355	3494	3633	3773	3912	4051	4190	
22	4329	4468	4607	4746	4885	5024	5164	5303	5442	5581	
23	5720	5859	5998	6137	6276	6415	6554	6693	6832	6971	
24	7110	7249	7388	7527	7666	7805	7944	8083	8222	8361	
25	8500	8639	8778	8917	9056	9195	9334	9473	9612	9751	
26	9890	0̄029	0̄168	0̄307	0̄445	0̄584	0̄723	0̄862	1̄001	1̄140	
27	495 1279	1418	1557	1695	1834	1973	2112	2251	2390	2529	139 1 13.9 2 27.8 3 41.7 4 55.6 5 69.5 6 83.4 7 97.3 8 111.2 9 125.1
28	2667	2806	2945	3084	3223	3362	3500	3639	3778	3917	
29	4056	4194	4333	4472	4611	4750	4888	5027	5166	5305	
3130	495 5443	5582	5721	5860	5998	6137	6276	6415	6553	6692	
31	6831	6969	7108	7247	7385	7524	7663	7802	7940	8079	
32	8218	8356	8495	8634	8772	8911	9049	9188	9327	9465	
33	9604	9743	9881	0̄020	0̄158	0̄297	0̄436	0̄574	0̄713	0̄851	
34	496 0990	1128	1267	1406	1544	1683	1821	1960	2098	2237	
35	2375	2514	2653	2791	2930	3068	3207	3345	3484	3622	
36	3761	3899	4038	4176	4314	4453	4591	4730	4868	5007	
37	5145	5284	5422	5560	5699	5837	5976	6114	6253	6391	
38	6529	6668	6806	6945	7083	7221	7360	7498	7636	7775	
39	7913	8052	8190	8328	8467	8605	8743	8882	9020	9158	138 1 13.8 2 27.6 3 41.4 4 55.2 5 69.0 6 82.8 7 96.6 8 110.4 9 124.2
3140	496 9296	9435	9573	9711	9850	9988	0̄126	0̄265	0̄403	0̄541	
41	497 0679	0818	0956	1094	1232	1371	1509	1647	1785	1924	
42	2062	2200	2338	2476	2615	2753	2891	3029	3167	3306	
43	3444	3582	3720	3858	3996	4135	4273	4411	4549	4687	
44	4825	4964	5102	5240	5378	5516	5654	5792	5930	6068	
45	6206	6345	6483	6621	6759	6897	7035	7173	7311	7449	
46	7587	7725	7863	8001	8139	8277	8415	8553	8691	8829	
47	8967	9105	9243	9381	9519	9657	9795	9933	0̄071	0̄209	
48	498 0347	0485	0623	0761	0899	1037	1175	1313	1451	1589	
49	1727	1865	2002	2140	2278	2416	2554	2692	2830	2968	
3150	498 3106	3243	3381	3519	3657	3795	3933	4071	4208	4346	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

		S.	T.
31000″ = 8° 36′ 40″	3100″ = 0° 51′ 40″	4.685 5585	6076
31100 = 8 38 20	3110 = 0 51 50	5584	6078
31200 = 8 40 0	3120 = 0 52 0	5583	6080
31300 = 8 41 40	3130 = 0 52 10	5582	6082
31400 = 8 43 20	3140 = 0 52 20	5581	6084

N.	0	1	2	3	4	5	6	7	8	9
3150	498 3106	3243	3381	3519	3657	3795	3933	4071	4208	4346
51	4484	4622	4760	4897	5035	5173	5311	5449	5587	5724
52	5862	6000	6138	6275	6413	6551	6689	6826	6964	7102
53	7240	7377	7515	7653	7791	7928	8066	8204	8341	8479
54	8617	8755	8892	9030	9168	9305	9443	9581	9718	9856
55	9994	0̅131	0̅269	0̅407	0̅544	0̅682	0̅819	0̅957	1̅095	1̅232
56	499 1370	1508	1645	1783	1920	2058	2196	2333	2471	2608
57	2746	2883	3021	3158	3296	3434	3571	3709	3846	3984
58	4121	4259	4396	4534	4671	4809	4946	5084	5221	5359
59	5496	5634	5771	5909	6046	6184	6321	6459	6596	6733
3160	499 6871	7008	7146	7283	7421	7558	7695	7833	7970	8108
61	8245	8382	8520	8657	8794	8932	9069	9207	9344	9481
62	9619	9756	9893	0̅031	0̅168	0̅305	0̅443	0̅580	0̅717	0̅855
63	500 0992	1129	1267	1404	1541	1678	1816	1953	2090	2227
64	2365	2502	2639	2777	2914	3051	3188	3325	3463	3600
65	3737	3874	4012	4149	4286	4423	4560	4698	4835	4972
66	5109	5246	5383	5521	5658	5795	5932	6069	6206	6344
67	6481	6618	6755	6892	7029	7166	7303	7440	7578	7715
68	7852	7989	8126	8263	8400	8537	8674	8811	8948	9085
69	9222	9359	9496	9634	9771	9908	0̅045	0̅182	0̅319	0̅456
3170	501 0593	0730	0867	1004	1141	1278	1415	1552	1688	1825
71	1962	2099	2236	2373	2510	2647	2784	2921	3058	3195
72	3332	3469	3606	3743	3879	4016	4153	4290	4427	4564
73	4701	4838	4974	5111	5248	5385	5522	5659	5796	5932
74	6069	6206	6343	6480	6617	6753	6890	7027	7164	7301
75	7437	7574	7711	7848	7984	8121	8258	8395	8531	8668
76	8805	8942	9078	9215	9352	9489	9625	9762	9899	0̅035
77	502 0172	0309	0446	0582	0719	0856	0992	1129	1266	1402
78	1539	1676	1812	1949	2086	2222	2359	2495	2632	2769
79	2905	3042	3178	3315	3452	3588	3725	3861	3998	4135
3180	502 4271	4408	4544	4681	4817	4954	5091	5227	5364	5500
81	5637	5773	5910	6046	6183	6319	6456	6592	6729	6865
82	7002	7138	7275	7411	7548	7684	7821	7957	8093	8230
83	8366	8503	8639	8776	8912	9049	9185	9321	9458	9594
84	9731	9867	0̅003	0̅140	0̅276	0̅413	0̅549	0̅685	0̅822	0̅958
85	503 1094	1231	1367	1503	1640	1776	1912	2049	2185	2321
86	2458	2594	2730	2867	3003	3139	3276	3412	3548	3684
87	3821	3957	4093	4229	4366	4502	4638	4774	4911	5047
88	5183	5319	5456	5592	5728	5864	6000	6137	6273	6409
89	6545	6681	6818	6954	7090	7226	7362	7498	7635	7771
3190	503 7907	8043	8179	8315	8451	8587	8724	8860	8996	9132
91	9268	9404	9540	9676	9812	9948	0̅085	0̅221	0̅357	0̅493
92	504 0629	0765	0901	1037	1173	1309	1445	1581	1717	1853
93	1989	2125	2261	2397	2533	2669	2805	2941	3077	3213
94	3349	3485	3621	3757	3893	4029	4165	4301	4437	4573
95	4709	4845	4980	5116	5252	5388	5524	5660	5796	5932
96	6068	6204	6339	6475	6611	6747	6883	7019	7155	7291
97	7426	7562	7698	7834	7970	8106	8241	8377	8513	8649
98	8785	8920	9056	9192	9328	9464	9599	9735	9871	0̅007
99	505 0142	0278	0414	0550	0685	0821	0957	1093	1228	1364
3200	505 1500	1635	1771	1907	2043	2178	2314	2450	2585	2721
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	138	137	136	135
1	13.8	13.7	13.6	13.5
2	27.6	27.4	27.2	27.0
3	41.4	41.1	40.8	40.5
4	55.2	54.8	54.4	54.0
5	69.0	68.5	68.0	67.5
6	82.8	82.2	81.6	81.0
7	96.6	95.9	95.2	94.5
8	110.4	109.6	108.8	108.0
9	124.2	123.3	122.4	121.5

$31500'' = 8°45'\ 0''$ $3150'' = 0°52'30''$ S. 4.685 5580 T. 6086
$31600 = 8\ 46\ 40$ $3160 = 0\ 52\ 40$ 5579 6088
$31700 = 8\ 48\ 20$ $3170 = 0\ 52\ 50$ 5578 6091
$31800 = 8\ 50\ 0$ $3180 = 0\ 53\ 0$ 5577 6093
$31900 = 8\ 51\ 40$ $3190 = 0\ 53\ 10$ 5576 6095

N.	0	1	2	3	4	5	6	7	8	9
3200	505 1500	1635	1771	1907	2043	2178	2314	2450	2585	2721
01	2857	2992	3128	3264	3399	3535	3671	3806	3942	4078
02	4213	4349	4485	4620	4756	4891	5027	5163	5298	5434
03	5569	5705	5841	5976	6112	6247	6383	6518	6654	6790
04	6925	7061	7196	7332	7467	7603	7738	7874	8009	8145
05	8280	8416	8551	8687	8822	8958	9093	9229	9364	9500
06	9635	9771	9906	0̄042	0̄177	0̄312	0̄448	0̄583	0̄719	0̄854
07	506 0990	1125	1260	1396	1531	1667	1802	1937	2073	2208
08	2344	2479	2614	2750	2885	3020	3156	3291	3426	3562
09	3697	3833	3968	4103	4238	4374	4509	4644	4780	4915
3210	506 5050	5186	5321	5456	5591	5727	5862	5997	6133	6268
11	6403	6538	6674	6809	6944	7079	7214	7350	7485	7620
12	7755	7891	8026	8161	8296	8431	8567	8702	8837	8972
13	9107	9242	9378	9513	9648	9783	9918	0̄053	0̄188	0̄324
14	507 0459	0594	0729	0864	0999	1134	1269	1405	1540	1675
15	1810	1945	2080	2215	2350	2485	2620	2755	2890	3025
16	3160	3295	3430	3566	3701	3836	3971	4106	4241	4376
17	4511	4646	4781	4916	5051	5186	5321	5456	5590	5725
18	5860	5995	6130	6265	6400	6535	6670	6805	6940	7075
19	7210	7345	7480	7614	7749	7884	8019	8154	8289	8424
3220	507 8559	8694	8828	8963	9098	9233	9368	9503	9638	9772
21	9907	0̄042	0̄177	0̄312	0̄447	0̄581	0̄716	0̄851	0̄986	1̄121
22	508 1255	1390	1525	1660	1794	1929	2064	2199	2334	2468
23	2603	2738	2873	3007	3142	3277	3411	3546	3681	3816
24	3950	4085	4220	4354	4489	4624	4758	4893	5028	5163
25	5297	5432	5567	5701	5836	5970	6105	6240	6374	6509
26	6644	6778	6913	7047	7182	7317	7451	7586	7720	7855
27	7990	8124	8259	8393	8528	8663	8797	8932	9066	9201
28	9335	9470	9604	9739	9873	0̄008	0̄142	0̄277	0̄411	0̄546
29	509 0680	0815	0949	1084	1218	1353	1487	1622	1756	1891
3230	509 2025	2160	2294	2429	2563	2697	2832	2966	3101	3235
31	3370	3504	3638	3773	3907	4042	4176	4310	4445	4579
32	4714	4848	4982	5117	5251	5385	5520	5654	5788	5923
33	6057	6191	6326	6460	6594	6729	6863	6997	7132	7266
34	7400	7534	7669	7803	7937	8072	8206	8340	8474	8609
35	8743	8877	9011	9146	9280	9414	9548	9682	9817	9951
36	510 0085	0219	0354	0488	0622	0756	0890	1024	1159	1293
37	1427	1561	1695	1829	1964	2098	2232	2366	2500	2634
38	2768	2903	3037	3171	3305	3439	3573	3707	3841	3975
39	4109	4244	4378	4512	4646	4780	4914	5048	5182	5316
3240	510 5450	5584	5718	5852	5986	6120	6254	6388	6522	6656
41	6790	6924	7058	7192	7326	7460	7594	7728	7862	7996
42	8130	8264	8398	8532	8666	8800	8934	9068	9202	9336
43	9469	9603	9737	9871	0̄005	0̄139	0̄273	0̄407	0̄541	0̄675
44	511 0808	0942	1076	1210	1344	1478	1612	1745	1879	2013
45	2147	2281	2415	2548	2682	2816	2950	3084	3218	3351
46	3485	3619	3753	3887	4020	4154	4288	4422	4555	4689
47	4823	4957	5090	5224	5358	5492	5625	5759	5893	6026
48	6160	6294	6428	6561	6695	6829	6962	7096	7230	7363
49	7497	7631	7764	7898	8032	8165	8299	8433	8566	8700
3250	511 8834	8967	9101	9234	9368	9502	9635	9769	9903	0̄036
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	136
1	13.6
2	27.2
3	40.8
4	54.4
5	68.0
6	81.6
7	95.2
8	108.8
9	122.4

	135
1	13.5
2	27.0
3	40.5
4	54.0
5	67.5
6	81.0
7	94.5
8	108.0
9	121.5

	134
1	13.4
2	26.8
3	40.2
4	53.6
5	67.0
6	80.4
7	93.8
8	107.2
9	120.6

	133
1	13.3
2	26.6
3	39.9
4	53.2
5	66.5
6	79.8
7	93.1
8	106.4
9	119.7

P. P.

32000″ = 8° 53′ 20″	3200″ = 0° 53′ 20″	S. 4.685 5574	T. 6097
32100 = 8 55 0	3210 = 0 53 30	5573	6099
32200 = 8 56 40	3220 = 0 53 40	5572	6101
32300 = 8 58 20	3230 = 0 53 50	5571	6104
32400 = 9 0 0	3240 = 0 54 0	5570	6106

N.	0	1	2	3	4	5	6	7	8	9
3250	511 8834	8967	9101	9234	9368	9502	9635	9769	9903	0̅036
51	512 0170	0303	0437	0570	0704	0838	0971	1105	1238	1372
52	1505	1639	1772	1906	2040	2173	2307	2440	2574	2707
53	2841	2974	3108	3241	3375	3508	3642	3775	3909	4042
54	4175	4309	4442	4576	4709	4843	4976	5110	5243	5377
55	5510	5643	5777	5910	6044	6177	6310	6444	6577	6711
56	6844	6977	7111	7244	7377	7511	7644	7778	7911	8044
57	8178	8311	8444	8578	8711	8844	8978	9111	9244	9377
58	9511	9644	9777	9911	0̅044	0̅177	0̅311	0̅444	0̅577	0̅710
59	513 0844	0977	1110	1243	1377	1510	1643	1776	1910	2043
3260	513 2176	2309	2442	2576	2709	2842	2975	3108	3242	3375
61	3508	3641	3774	3908	4041	4174	4307	4440	4573	4706
62	4840	4973	5106	5239	5372	5505	5638	5771	5905	6038
63	6171	6304	6437	6570	6703	6836	6969	7102	7235	7368
64	7502	7635	7768	7901	8034	8167	8300	8433	8566	8699
65	8832	8965	9098	9231	9364	9497	9630	9763	9896	0̅029
66	514 0162	0295	0428	0561	0694	0827	0960	1093	1225	1358
67	1491	1624	1757	1890	2023	2156	2289	2422	2555	2688
68	2820	2953	3086	3219	3352	3485	3618	3751	3883	4016
69	4149	4282	4415	4548	4681	4813	4946	5079	5212	5345
3270	514 5478	5610	5743	5876	6009	6142	6274	6407	6540	6673
71	6805	6938	7071	7204	7336	7469	7602	7735	7867	8000
72	8133	8266	8398	8531	8664	8797	8929	9062	9195	9327
73	9460	9593	9725	9858	9991	0̅123	0̅256	0̅389	0̅521	0̅654
74	515 0787	0919	1052	1185	1317	1450	1583	1715	1848	1980
75	2113	2246	2378	2511	2643	2776	2909	3041	3174	3306
76	3439	3571	3704	3837	3969	4102	4234	4367	4499	4632
77	4764	4897	5029	5162	5294	5427	5560	5692	5825	5957
78	6089	6222	6354	6487	6619	6752	6884	7017	7149	7282
79	7414	7547	7679	7811	7944	8076	8209	8341	8474	8606
3280	515 8738	8871	9003	9136	9268	9400	9533	9665	9798	9930
81	516 0062	0195	0327	0459	0592	0724	0856	0989	1121	1253
82	1386	1518	1650	1783	1915	2047	2180	2312	2444	2577
83	2709	2841	2973	3106	3238	3370	3502	3635	3767	3899
84	4031	4164	4296	4428	4560	4693	4825	4957	5089	5222
85	5354	5486	5618	5750	5883	6015	6147	6279	6411	6543
86	6676	6808	6940	7072	7204	7336	7469	7601	7733	7865
87	7997	8129	8261	8393	8526	8658	8790	8922	9054	9186
88	9318	9450	9582	9714	9846	9978	0̅111	0̅243	0̅375	0̅507
89	517 0639	0771	0903	1035	1167	1299	1431	1563	1695	1827
3290	517 1959	2091	2223	2355	2487	2619	2751	2883	3015	3147
91	3279	3411	3543	3675	3807	3939	4071	4202	4334	4466
92	4598	4730	4862	4994	5126	5258	5390	5522	5654	5785
93	5917	6049	6181	6313	6445	6577	6709	6840	6972	7104
94	7236	7368	7500	7631	7763	7895	8027	8159	8291	8422
95	8554	8686	8818	8950	9081	9213	9345	9477	9608	9740
96	9872	0̅004	0̅136	0̅267	0̅399	0̅531	0̅663	0̅794	0̅926	1̅058
97	518 1189	1321	1453	1585	1716	1848	1980	2111	2243	2375
98	2507	2638	2770	2902	3033	3165	3297	3428	3560	3692
99	3823	3955	4086	4218	4350	4481	4613	4745	4876	5008
3300	518 5139	5271	5403	5534	5666	5797	5929	6061	6192	6324
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	134
1	13.4
2	26.8
3	40.2
4	53.6
5	67.0
6	80.4
7	93.8
8	107.2
9	120.6

	133
1	13.3
2	26.6
3	39.9
4	53.2
5	66.5
6	79.8
7	93.1
8	106.4
9	119.7

	132
1	13.2
2	26.4
3	39.6
4	52.8
5	66.0
6	79.2
7	92.4
8	105.6
9	118.8

	131
1	13.1
2	26.2
3	39.3
4	52.4
5	65.5
6	78.6
7	91.7
8	104.8
9	117.9

P. P.

32500″ = 9° 1′ 40″ 3250″ = 0° 54′ 10″ S. 4.685 5569 T. 6108
32600 = 9 3 20 3260 = 0 54 20 5568 6110
32700 = 9 5 0 3270 = 0 54 30 5567 6113
32800 = 9 6 40 3280 = 0 54 40 5566 6115
32900 = 9 8 20 3290 = 0 54 50 5565 6117

N.	0	1	2	3	4	5	6	7	8	9
3300	518 5139	5271	5403	5534	5666	5797	5929	6061	6192	6324
01	6455	6587	6718	6850	6981	7113	7245	7376	7508	7639
02	7771	7902	8034	8165	8297	8428	8560	8691	8823	8954
03	9086	9217	9349	9480	9612	9743	9875	0̄006	0̄137	0̄269
04	519 0400	0532	0663	0795	0926	1058	1189	1320	1452	1583
05	1715	1846	1977	2109	2240	2372	2503	2634	2766	2897
06	3028	3160	3291	3423	3554	3685	3817	3948	4079	4211
07	4342	4473	4605	4736	4867	4999	5130	5261	5392	5524
08	5655	5786	5918	6049	6180	6311	6443	6574	6705	6836
09	6968	7099	7230	7361	7493	7624	7755	7886	8018	8149
3310	519 8280	8411	8542	8674	8805	8936	9067	9198	9329	9461
11	9592	9723	9854	9985	0̄116	0̄248	0̄379	0̄510	0̄641	0̄772
12	520 0903	1034	1166	1297	1428	1559	1690	1821	1952	2083
13	2214	2345	2477	2608	2739	2870	3001	3132	3263	3394
14	3525	3656	3787	3918	4049	4180	4311	4442	4573	4704
15	4835	4966	5097	5228	5359	5490	5621	5752	5883	6014
16	6145	6276	6407	6538	6669	6800	6931	7062	7193	7324
17	7455	7586	7717	7847	7978	8109	8240	8371	8502	8633
18	8764	8895	9026	9156	9287	9418	9549	9680	9811	9942
19	521 0073	0203	0334	0465	0596	0727	0858	0988	1119	1250
3320	521 1381	1512	1642	1773	1904	2035	2166	2296	2427	2558
21	2689	2820	2950	3081	3212	3343	3473	3604	3735	3866
22	3996	4127	4258	4388	4519	4650	4781	4911	5042	5173
23	5303	5434	5565	5695	5826	5957	6088	6218	6349	6479
24	6610	6741	6871	7002	7133	7263	7394	7525	7655	7786
25	7916	8047	8178	8308	8439	8570	8700	8831	8961	9092
26	9222	9353	9484	9614	9745	9875	0̄006	0̄136	0̄267	0̄397
27	522 0528	0659	0789	0920	1050	1181	1311	1442	1572	1703
28	1833	1964	2094	2225	2355	2486	2616	2747	2877	3007
29	3138	3268	3399	3529	3660	3790	3921	4051	4181	4312
3330	522 4442	4573	4703	4834	4964	5094	5225	5355	5486	5616
31	5746	5877	6007	6137	6268	6398	6529	6659	6789	6920
32	7050	7180	7311	7441	7571	7702	7832	7962	8093	8223
33	8353	8483	8614	8744	8874	9005	9135	9265	9395	9526
34	9656	9786	9916	0̄047	0̄177	0̄307	0̄437	0̄568	0̄698	0̄828
35	523 0958	1089	1219	1349	1479	1609	1740	1870	2000	2130
36	2260	2391	2521	2651	2781	2911	3041	3172	3302	3432
37	3562	3692	3822	3952	4083	4213	4343	4473	4603	4733
38	4863	4993	5124	5254	5384	5514	5644	5774	5904	6034
39	6164.	6294	6424	6554	6684	6814	6945	7075	7205	7335
3340	523 7465	7595	7725	7855	7985	8115	8245	8375	8505	8635
41	8765	8895	9025	9155	9285	9415	9545	9675	9805	9935
42	524 0064	0194	0324	0454	0584	0714	0844	0974	1104	1234
43	1364	1494	1624	1753	1883	2013	2143	2273	2403	2533
44	2663	2793	2922	3052	3182	3312	3442	3572	3702	3831
45	3961	4091	4221	4351	4481	4610	4740	4870	5000	5130
46	5259	5389	5519	5649	5779	5908	6038	6168	6298	6427
47	6557	6687	6817	6946	7076	7206	7336	7465	7595	7725
48	7854	7984	8114	8244	8373	8503	8633	8762	8892	9022
49	9151	9281	9411	9540	9670	9800	9929	0̄059	0̄189	0̄318
3350	525 0448	0578	0707	0837	0967	1096	1226	1355	1485	1615
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	132
1	13.2
2	26.4
3	39.6
4	52.8
5	66.0
6	79.2
7	92.4
8	105.6
9	118.8

	131
1	13.1
2	26.2
3	39.3
4	52.4
5	65.5
6	78.6
7	91.7
8	104.8
9	117.9

	130
1	13.0
2	26.0
3	39.0
4	52.0
5	65.0
6	78.0
7	91.0
8	104.0
9	117.0

	129
1	12.9
2	25.8
3	38.7
4	51.6
5	64.5
6	77.4
7	90.3
8	103.2
9	116.1

P. P.

33000″ = 9° 10′ 0″ 3300″ = 0° 55′ 0″ S. 4.685 5563 T. 6119
33100 = 9 11 40 3310 = 0 55 10 5562 6121
33200 = 9 13 20 3320 = 0 55 20 5561 6124
33300 = 9 15 0 3330 = 0 55 30 5560 6126
33400 = 9 16 40 3340 = 0 55 40 5559 6128

N.	0	1	2	3	4	5	6	7	8	9	P. P.	
3350	525 0448	0578	0707	0837	0967	1096	1226	1355	1485	1615		
51	1744	1874	2003	2133	2263	2392	2522	2651	2781	2911		
52	3040	3170	3299	3429	3558	3688	3817	3947	4076	4206		
53	4336	4465	4595	4724	4854	4983	5113	5242	5372	5501		130
54	5631	5760	5890	6019	6148	6278	6407	6537	6666	6796	1	13.0
55	6925	7055	7184	7314	7443	7572	7702	7831	7961	8090	2	26.0
56	8220	8349	8478	8608	8737	8867	8996	9125	9255	9384	3	39.0
57	9513	9643	9772	9902	0̄031	0̄160	0̄290	0̄419	0̄548	0̄678	4	52.0
58	526 0807	0936	1066	1195	1324	1454	1583	1712	1841	1971	5	65.0
59	2100	2229	2359	2488	2617	2746	2876	3005	3134	3264	6	78.0
3360	526 3393	3522	3651	3781	3910	4039	4168	4297	4427	4556	7	91.0
61	4685	4814	4944	5073	5202	5331	5460	5590	5719	5848	8	104.0
62	5977	6106	6235	6365	6494	6623	6752	6881	7010	7140	9	117.0
63	7269	7398	7527	7656	7785	7914	8043	8173	8302	8431		
64	8560	8689	8818	8947	9076	9205	9334	9463	9593	9722		
65	9851	9980	0̄109	0̄238	0̄367	0̄496	0̄625	0̄754	0̄883	1̄012		129
66	527 1141	1270	1399	1528	1657	1786	1915	2044	2173	2302	1	12.9
67	2431	2560	2689	2818	2947	3076	3205	3334	3463	3592	2	25.8
68	3721	3850	3979	4108	4237	4366	4494	4623	4752	4881	3	38.7
69	5010	5139	5268	5397	5526	5655	5783	5912	6041	6170	4	51.6
3370	527 6299	6428	6557	6686	6814	6943	7072	7201	7330	7459	5	64.5
71	7588	7716	7845	7974	8103	8232	8360	8489	8618	8747	6	77.4
72	8876	9004	9133	9262	9391	9520	9648	9777	9906	0̄035	7	90.3
73	528 0163	0292	0421	0550	0678	0807	0936	1065	1193	1322	8	103.2
74	1451	1579	1708	1837	1966	2094	2223	2352	2480	2609	9	116.1
75	2738	2866	2995	3124	3252	3381	3510	3638	3767	3896		
76	4024	4153	4282	4410	4539	4668	4796	4925	5053	5182		
77	5311	5439	5568	5696	5825	5954	6082	6211	6339	6468		128
78	6596	6725	6854	6982	7111	7239	7368	7496	7625	7753	1	12.8
79	7882	8010	8139	8267	8396	8525	8653	8782	8910	9039	2	25.6
3380	528 9167	9295	9424	9552	9681	9809	9938	0̄066	0̄195	0̄323	3	38.4
81	529 0452	0580	0709	0837	0965	1094	1222	1351	1479	1608	4	51.2
82	1736	1864	1993	2121	2250	2378	2506	2635	2763	2892	5	64.0
83	3020	3148	3277	3405	3533	3662	3790	3919	4047	4175	6	76.8
84	4304	4432	4560	4689	4817	4945	5074	5202	5330	5458	7	89.6
85	5587	5715	5843	5972	6100	6228	6356	6485	6613	6741	8	102.4
86	6870	6998	7126	7254	7383	7511	7639	7767	7896	8024	9	115.2
87	8152	8280	8408	8537	8665	8793	8921	9049	9178	9306		
88	9434	9562	9690	9819	9947	0̄075	0̄203	0̄331	0̄459	0̄588		
89	530 0716	0844	0972	1100	1228	1356	1485	1613	1741	1869		127
3390	530 1997	2125	2253	2381	2509	2637	2766	2894	3022	3150	1	12.7
91	3278	3406	3534	3662	3790	3918	4046	4174	4302	4430	2	25.4
92	4558	4686	4814	4943	5071	5199	5327	5455	5583	5711	3	38.1
93	5839	5967	6095	6223	6351	6479	6607	6734	6862	6990	4	50.8
94	7118	7246	7374	7502	7630	7758	7886	8014	8142	8270	5	63.5
95	8398	8526	8654	8782	8909	9037	9165	9293	9421	9549	6	76.2
96	9677	9805	9933	0̄060	0̄188	0̄316	0̄444	0̄572	0̄700	0̄828	7	88.9
97	531 0955	1083	1211	1339	1467	1595	1722	1850	1978	2106	8	101.6
98	2234	2362	2489	2617	2745	2873	3001	3128	3256	3384	9	114.3
99	3512	3639	3767	3895	4023	4150	4278	4406	4534	4661		
3400	531 4789	4917	5045	5172	5300	5428	5556	5683	5811	5939		
N.	0	1	2	3	4	5	6	7	8	9	P. P.	

33500″ = 9°18′20″ 3350″ = 0°55′50″ S. 4.685 5558 T. 6131
33600 = 9 20 0 3360 = 0 56 0 5557 6133
33700 = 9 21 40 3370 = 0 56 10 5555 6135
33800 = 9 23 20 3380 = 0 56 20 5554 6137
33900 = 9 25 0 3390 = 0 56 30 5553 6140

N.	0	1	2	3	4	5	6	7	8	9
3400	531 4789	4917	5045	5172	5300	5428	5556	5683	5811	5939
01	6066	6194	6322	6449	6577	6705	6832	6960	7088	7215
02	7343	7471	7598	7726	7854	7981	8109	8237	8364	8492
03	8619	8747	8875	9002	9130	9258	9385	9513	9640	9768
04	9896	0̄023	0̄151	0̄278	0̄406	0̄533	0̄661	0̄789	0̄916	1̄044
05	532 1171	1299	1426	1554	1681	1809	1936	2064	2191	2319
06	2446	2574	2701	2829	2956	3084	3211	3339	3466	3594
07	3721	3849	3976	4104	4231	4359	4486	4614	4741	4868
08	4996	5123	5251	5378	5506	5633	5760	5888	6015	6143
09	6270	6397	6525	6652	6780	6907	7034	7162	7289	7416
3410	532 7544	7671	7799	7926	8053	8181	8308	8435	8563	8690
11	8817	8945	9072	9199	9326	9454	9581	9708	9836	9963
12	533 0090	0218	0345	0472	0599	0727	0854	0981	1108	1236
13	1363	1490	1617	1745	1872	1999	2126	2254	2381	2508
14	2635	2762	2890	3017	3144	3271	3398	3526	3653	3780
15	3907	4034	4161	4289	4416	4543	4670	4797	4924	5051
16	5179	5306	5433	5560	5687	5814	5941	6068	6196	6323
17	6450	6577	6704	6831	6958	7085	7212	7339	7466	7594
18	7721	7848	7975	8102	8229	8356	8483	8610	8737	8864
19	8991	9118	9245	9372	9499	9626	9753	9880	0̄007	0̄134
3420	534 0261	0388	0515	0642	0769	0896	1023	1150	1277	1404
21	1531	1658	1785	1912	2039	2165	2292	2419	2546	2673
22	2800	2927	3054	3181	3308	3435	3561	3688	3815	3942
23	4069	4196	4323	4450	4576	4703	4830	4957	5084	5211
24	5338	5464	5591	5718	5845	5972	6099	6225	6352	6479
25	6606	6733	6859	6986	7113	7240	7366	7493	7620	7747
26	7874	8000	8127	8254	8381	8507	8634	8761	8888	9014
27	9141	9268	9394	9521	9648	9775	9901	0̄028	0̄155	0̄281
28	535 0408	0535	0662	0788	0915	1042	1168	1295	1422	1548
29	1675	1802	1928	2055	2181	2308	2435	2561	2688	2815
3430	535 2941	3068	3194	3321	3448	3574	3701	3827	3954	4081
31	4207	4334	4460	4587	4713	4840	4967	5093	5220	5346
32	5473	5599	5726	5852	5979	6105	6232	6359	6485	6612
33	6738	6865	6991	7118	7244	7371	7497	7623	7750	7876
34	8003	8129	8256	8382	8509	8635	8762	8888	9015	9141
35	9267	9394	9520	9647	9773	9900	0̄026	0̄152	0̄279	0̄405
36	536 0532	0658	0784	0911	1037	1163	1290	1416	1543	1669
37	1795	1922	2048	2174	2301	2427	2553	2680	2806	2932
38	3059	3185	3311	3438	3564	3690	3817	3943	4069	4195
39	4322	4448	4574	4701	4827	4953	5079	5206	5332	5458
3440	536 5584	5711	5837	5963	6089	6216	6342	6468	6594	6721
41	6847	6973	7099	7225	7352	7478	7604	7730	7856	7982
42	8109	8235	8361	8487	8613	8739	8866	8992	9118	9244
43	9370	9496	9622	9749	9875	0̄001	0̄127	0̄253	0̄379	0̄505
44	537 0631	0758	0884	1010	1136	1262	1388	1514	1640	1766
45	1892	2018	2144	2270	2396	2523	2649	2775	2901	3027
46	3153	3279	3405	3531	3657	3783	3909	4035	4161	4287
47	4413	4539	4665	4791	4917	5043	5169	5295	5421	5547
48	5673	5799	5924	6050	6176	6302	6428	6554	6680	6806
49	6932	7058	7184	7310	7436	7561	7687	7813	7939	8065
3450	537 8191	8317	8443	8569	8694	8820	8946	9072	9198	9324
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	128
1	12.8
2	25.6
3	38.4
4	51.2
5	64.0
6	76.8
7	89.6
8	102.4
9	115.2

	127
1	12.7
2	25.4
3	38.1
4	50.8
5	63.5
6	76.2
7	88.9
8	101.6
9	114.3

	126
1	12.6
2	25.2
3	37.8
4	50.4
5	63.0
6	75.6
7	88.2
8	100.8
9	113.4

	125
1	12.5
2	25.0
3	37.5
4	50.0
5	62.5
6	75.0
7	87.5
8	100.0
9	112.5

P. P.

34000″ = 9° 26′ 40″ 3400″ = 0° 56′ 40″ S. 4.685 5552 T. 6142
34100 = 9 28 20 3410 = 0 56 50 5551 6144
34200 = 9 30 0 3420 = 0 57 0 5550 6147
34300 = 9 31 40 3430 = 0 57 10 5549 6149
34400 = 9 33 20 3440 = 0 57 20 5547 6151

N.	0	1	2	3	4	5	6	7	8	9	P. P.
3450	537 8191	8317	8443	8569	8694	8820	8946	9072	9198	9324	
51	9450	9575	9701	9827	9953	0̄079	0̄205	0̄330	0̄456	0̄582	
52	538 0708	0834	0959	1085	1211	1337	1463	1588	1714	1840	
53	1966	2092	2217	2343	2469	2595	2720	2846	2972	3098	
54	3223	3349	3475	3601	3726	3852	3978	4103	4229	4355	
55	4481	4606	4732	4858	4983	5109	5235	5360	5486	5612	
56	5737	5863	5989	6114	6240	6366	6491	6617	6743	6868	126
57	6994	7119	7245	7371	7496	7622	7747	7873	7999	8124	1 12.6
58	8250	8375	8501	8627	8752	8878	9003	9129	9255	9380	2 25.2
59	9506	9631	9757	9882	0̄008	0̄133	0̄259	0̄384	0̄510	0̄635	3 37.8
3460	539 0761	0887	1012	1138	1263	1389	1514	1640	1765	1891	4 50.4 5 63.0
61	2016	2141	2267	2392	2518	2643	2769	2894	3020	3145	6 75.6
62	3271	3396	3522	3647	3772	3898	4023	4149	4274	4400	7 88.2
63	4525	4650	4776	4901	5027	5152	5277	5403	5528	5653	8 100.8
64	5779	5904	6030	6155	6280	6406	6531	6656	6782	6907	9 113.4
65	7032	7158	7283	7408	7534	7659	7784	7910	8035	8160	
66	8286	8411	8536	8661	8787	8912	9037	9163	9288	9413	
67	9538	9664	9789	9914	0̄039	0̄165	0̄290	0̄415	0̄540	0̄666	
68	540 0791	0916	1041	1167	1292	1417	1542	1667	1793	1918	
69	2043	2168	2293	2419	2544	2669	2794	2919	3044	3170	
3470	540 3295	3420	3545	3670	3795	3920	4046	4171	4296	4421	
71	4546	4671	4796	4921	5047	5172	5297	5422	5547	5672	125
72	5797	5922	6047	6172	6297	6423	6548	6673	6798	6923	1 12.5
73	7048	7173	7298	7423	7548	7673	7798	7923	8048	8173	2 25.0
74	8298	8423	8548	8673	8798	8923	9048	9173	9298	9423	3 37.5
75	9548	9673	9798	9923	0̄048	0̄173	0̄298	0̄423	0̄548	0̄673	4 50.0
76	541 0798	0923	1048	1172	1297	1422	1547	1672	1797	1922	5 62.5 6 75.0
77	2047	2172	2297	2422	2546	2671	2796	2921	3046	3171	7 87.5
78	3296	3421	3546	3670	3795	3920	4045	4170	4295	4419	8 100.0
79	4544	4669	4794	4919	5044	5168	5293	5418	5543	5668	9 112.5
3480	541 5792	5917	6042	6167	6292	6416	6541	6666	6791	6915	
81	7040	7165	7290	7415	7539	7664	7789	7913	8038	8163	
82	8288	8412	8537	8662	8787	8911	9036	9161	9285	9410	
83	9535	9659	9784	9909	0̄033	0̄158	0̄283	0̄407	0̄532	0̄657	
84	542 0781	0906	1031	1155	1280	1405	1529	1654	1779	1903	
85	2028	2152	2277	2402	2526	2651	2775	2900	3025	3149	
86	3274	3398	3523	3648	3772	3897	4021	4146	4270	4395	124
87	4519	4644	4769	4893	5018	5142	5267	5391	5516	5640	1 12.4
88	5765	5889	6014	6138	6263	6387	6512	6636	6761	6885	2 24.8
89	7010	7134	7259	7383	7508	7632	7756	7881	8005	8130	3 37.2
3490	542 8254	8379	8503	8628	8752	8876	9001	9125	9250	9374	4 49.6 5 62.0
91	9498	9623	9747	9872	9996	0̄120	0̄245	0̄369	0̄494	0̄618	6 74.4
92	543 0742	0867	0991	1115	1240	1364	1488	1613	1737	1862	7 86.8
93	1986	2110	2235	2359	2483	2607	2732	2856	2980	3105	8 99.2
94	3229	3353	3478	3602	3726	3850	3975	4099	4223	4348	9 111.6
95	4472	4596	4720	4845	4969	5093	5217	5342	5466	5590	
96	5714	5838	5963	6087	6211	6335	6460	6584	6708	6832	
97	6956	7081	7205	7329	7453	7577	7701	7826	7950	8074	
98	8198	8322	8446	8571	8695	8819	8943	9067	9191	9315	
99	9439	9564	9688	9812	9936	0̄060	0̄184	0̄308	0̄432	0̄556	
3500	544 0680	0805	0929	1053	1177	1301	1425	1549	1673	1797	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

		S.	T.
34500″ = 9° 35′ 0″	3450″ = 0° 57′ 30″	4.685 5546	6154
34600 = 9 36 40	3460 = 0 57 40	5545	6156
34700 = 9 38 20	3470 = 0 57 50	5544	6158
34800 = 9 40 0	3480 = 0 58 0	5543	6161
34900 = 9 41 40	3490 = 0 58 10	5541	6163

N.	0	1	2	3	4	5	6	7	8	9
3500	544 0680	0805	0929	1053	1177	1301	1425	1549	1673	1797
01	1921	2045	2169	2293	2417	2541	2665	2789	2913	3037
02	3161	3285	3409	3533	3657	3781	3905	4029	4153	4277
03	4401	4525	4649	4773	4897	5021	5145	5269	5393	5517
04	5641	5765	5889	6013	6137	6261	6385	6508	6632	6756
05	6880	7004	7128	7252	7376	7500	7624	7747	7871	7995
06	8119	8243	8367	8491	8615	8738	8862	8986	9110	9234
07	9358	9481	9605	9729	9853	9977	0̄101	0̄224	0̄348	0̄472
08	545 0596	0720	0843	0967	1091	1215	1339	1462	1586	1710
09	1834	1957	2081	2205	2329	2452	2576	2700	2824	2947
3510	545 3071	3195	3319	3442	3566	3690	3813	3937	4061	4185
11	4308	4432	4556	4679	4803	4927	5050	5174	5298	5421
12	5545	5669	5792	5916	6040	6163	6287	6411	6534	6658
13	6781	6905	7029	7152	7276	7400	7523	7647	7770	7894
14	8018	8141	8265	8388	8512	8635	8759	8883	9006	9130
15	9253	9377	9500	9624	9747	9871	9995	0̄118	0̄242	0̄365
16	546 0489	0612	0736	0859	0983	1106	1230	1353	1477	1600
17	1724	1847	1971	2094	2218	2341	2465	2588	2711	2835
18	2958	3082	3205	3329	3452	3576	3699	3822	3946	4069
19	4193	4316	4439	4563	4686	4810	4933	5056	5180	5303
3520	546 5427	5550	5673	5797	5920	6043	6167	6290	6414	6537
21	6660	6784	6907	7030	7154	7277	7400	7524	7647	7770
22	7894	8017	8140	8263	8387	8510	8633	8757	8880	9003
23	9126	9250	9373	9496	9620	9743	9866	9989	0̄113	0̄236
24	547 0359	0482	0605	0729	0852	0975	1098	1222	1345	1468
25	1591	1714	1838	1961	2084	2207	2330	2454	2577	2700
26	2823	2946	3069	3193	3316	3439	3562	3685	3808	3931
27	4055	4178	4301	4424	4547	4670	4793	4916	5040	5163
28	5286	5409	5532	5655	5778	5901	6024	6147	6270	6394
29	6517	6640	6763	6886	7009	7132	7255	7378	7501	7624
3530	547 7747	7870	7993	8116	8239	8362	8485	8608	8731	8854
31	8977	9100	9223	9346	9469	9592	9715	9838	9961	0̄084
32	548 0207	0330	0453	0576	0699	0822	0945	1068	1191	1313
33	1436	1559	1682	1805	1928	2051	2174	2297	2420	2543
34	2665	2788	2911	3034	3157	3280	3403	3526	3648	3771
35	3894	4017	4140	4263	4386	4508	4631	4754	4877	5000
36	5123	5245	5368	5491	5614	5737	5859	5982	6105	6228
37	6351	6473	6596	6719	6842	6964	7087	7210	7333	7456
38	7578	7701	7824	7947	8069	8192	8315	8437	8560	8683
39	8806	8928	9051	9174	9296	9419	9542	9665	9787	9910
3540	549 0033	0155	0278	0401	0523	0646	0769	0891	1014	1137
41	1259	1382	1505	1627	1750	1872	1995	2118	2240	2363
42	2486	2608	2731	2853	2976	3099	3221	3344	3466	3589
43	3712	3834	3957	4079	4202	4324	4447	4569	4692	4815
44	4937	5060	5182	5305	5427	5550	5672	5795	5917	6040
45	6162	6285	6407	6530	6652	6775	6897	7020	7142	7265
46	7387	7510	7632	7755	7877	8000	8122	8245	8367	8489
47	8612	8734	8857	8979	9102	9224	9346	9469	9591	9714
48	9836	9959	0̄081	0̄203	0̄326	0̄448	0̄570	0̄693	0̄815	0̄938
49	550 1060	1182	1305	1427	1549	1672	1794	1917	2039	2161
3550	550 2284	2406	2528	2651	2773	2895	3017	3140	3262	3384
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	125
1	12.5
2	25.0
3	37.5
4	50.0
5	62.5
6	75.0
7	87.5
8	100.0
9	112.5

	124
1	12.4
2	24.8
3	37.2
4	49.6
5	62.0
6	74.4
7	86.8
8	99.2
9	111.6

	123
1	12.3
2	24.6
3	36.9
4	49.2
5	61.5
6	73.8
7	86.1
8	98.4
9	110.7

	122
1	12.2
2	24.4
3	36.6
4	48.8
5	61.0
6	73.2
7	85.4
8	97.6
9	109.8

P. P.

35000″ = 9° 43′ 20″	3500″ = 0° 58′ 20″	S. 4.685 5540	T. 6166
35100 = 9 45 0	3510 = 0 58 30	5539	6168
35200 = 9 46 40	3520 = 0 58 40	5538	6170
35300 = 9 48 20	3530 = 0 58 50	5537	6173
35400 = 9 50 0	3540 = 0 59 0	5535	6175

N.	0	1	2	3	4	5	6	7	8	9
3550	550 2284	2406	2528	2651	2773	2895	3017	3140	3262	3384
51	3507	3629	3751	3874	3996	4118	4240	4363	4485	4607
52	4730	4852	4974	5096	5219	5341	5463	5585	5708	5830
53	5952	6074	6197	6319	6441	6563	6685	6808	6930	7052
54	7174	7296	7419	7541	7663	7785	7907	8030	8152	8274
55	8396	8518	8640	8763	8885	9007	9129	9251	9373	9495
56	9618	9740	9862	9984	0̄106	0̄228	0̄350	0̄472	0̄594	0̄717
57	551 0839	0961	1083	1205	1327	1449	1571	1693	1815	1937
58	2059	2181	2304	2426	2548	2670	2792	2914	3036	3158
59	3280	3402	3524	3646	3768	3890	4012	4134	4256	4378
3560	551 4500	4622	4744	4866	4988	5110	5232	5354	5476	5598
61	5720	5842	5964	6086	6208	6329	6451	6573	6695	6817
62	6939	7061	7183	7305	7427	7549	7671	7793	7914	8036
63	8158	8280	8402	8524	8646	8768	8890	9011	9133	9255
64	9377	9499	9621	9743	9864	9986	0̄108	0̄230	0̄352	0̄474
65	552 0595	0717	0839	0961	1083	1204	1326	1448	1570	1692
66	1813	1935	2057	2179	2301	2422	2544	2666	2788	2909
67	3031	3153	3275	3396	3518	3640	3762	3883	4005	4127
68	4248	4370	4492	4614	4735	4857	4979	5100	5222	5344
69	5465	5587	5709	5831	5952	6074	6196	6317	6439	6561
3570	552 6682	6804	6925	7047	7169	7290	7412	7534	7655	7777
71	7899	8020	8142	8263	8385	8507	8628	8750	8871	8993
72	9115	9236	9358	9479	9601	9722	9844	9965	0̄087	0̄209
73	553 0330	0452	0573	0695	0816	0938	1059	1181	1302	1424
74	1545	1667	1789	1910	2032	2153	2275	2396	2517	2639
75	2760	2882	3003	3125	3246	3368	3489	3611	3732	3854
76	3975	4097	4218	4339	4461	4582	4704	4825	4947	5068
77	5189	5311	5432	5554	5675	5796	5918	6039	6161	6282
78	6403	6525	6646	6767	6889	7010	7132	7253	7374	7496
79	7617	7738	7860	7981	8102	8224	8345	8466	8588	8709
3580	553 8830	8952	9073	9194	9315	9437	9558	9679	9801	9922
81	554 0043	0164	0286	0407	0528	0650	0771	0892	1013	1135
82	1256	1377	1498	1620	1741	1862	1983	2104	2226	2347
83	2468	2589	2710	2832	2953	3074	3195	3316	3438	3559
84	3680	3801	3922	4044	4165	4286	4407	4528	4649	4770
85	4892	5013	5134	5255	5376	5497	5618	5740	5861	5982
86	6103	6224	6345	6466	6587	6708	6829	6951	7072	7193
87	7314	7435	7556	7677	7798	7919	8040	8161	8282	8403
88	8524	8645	8766	8887	9008	9130	9251	9372	9493	9614
89	9735	9856	9977	0̄098	0̄219	0̄340	0̄461	0̄582	0̄703	0̄824
3590	555 0944	1065	1186	1307	1428	1549	1670	1791	1912	2033
91	2154	2275	2396	2517	2638	2759	2880	3001	3121	3242
92	3363	3484	3605	3726	3847	3968	4089	4210	4330	4451
93	4572	4693	4814	4935	5056	5176	5297	5418	5539	5660
94	5781	5902	6022	6143	6264	6385	6506	6627	6747	6868
95	6989	7110	7231	7351	7472	7593	7714	7835	7955	8076
96	8197	8318	8438	8559	8680	8801	8921	9042	9163	9284
97	9404	9525	9646	9767	9887	0̄008	0̄129	0̄249	0̄370	0̄491
98	556 0612	0732	0853	0974	1094	1215	1336	1456	1577	1698
99	1818	1939	2060	2180	2301	2422	2542	2663	2784	2904
3600	556 3025	3146	3266	3387	3508	3628	3749	3869	3990	4111
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	123	122	121	120
1	12.3	12.2	12.1	12.0
2	24.6	24.4	24.2	24.0
3	36.9	36.6	36.3	36.0
4	49.2	48.8	48.4	48.0
5	61.5	61.0	60.5	60.0
6	73.8	73.2	72.6	72.0
7	86.1	85.4	84.7	84.0
8	98.4	97.6	96.8	96.0
9	110.7	109.8	108.9	108.0

35500″ = 9° 51′ 40″   3550″ = 0° 59′ 10″   S. 4.685 5534   T. 6178
35600 = 9 53 20   3560 = 0 59 20   5533   6180
35700 = 9 55 0   3570 = 0 59 30   5532   6182
35800 = 9 56 40   3580 = 0 59 40   5531   6185
35900 = 9 58 20   3590 = 0 59 50   5529   6187

N.	0	1	2	3	4	5	6	7	8	9
3600	556 3025	3146	3266	3387	3508	3628	3749	3869	3990	4111
01	4231	4352	4472	4593	4714	4834	4955	5075	5196	5317
02	5437	5558	5678	5799	5919	6040	6160	6281	6402	6522
03	6643	6763	6884	7004	7125	7245	7366	7486	7607	7727
04	7848	7968	8089	8209	8330	8450	8571	8691	8812	8932
05	9053	9173	9294	9414	9535	9655	9775	9896	0̄016	0̄137
06	557 0257	0378	0498	0619	0739	0859	0980	1100	1221	1341
07	1461	1582	1702	1823	1943	2063	2184	2304	2425	2545
08	2665	2786	2906	3026	3147	3267	3387	3508	3628	3748
09	3869	3989	4109	4230	4350	4470	4591	4711	4831	4952
3610	557 5072	5192	5313	5433	5553	5673	5794	5914	6034	6155
11	6275	6395	6515	6636	6756	6876	6996	7117	7237	7357
12	7477	7598	7718	7838	7958	8079	8199	8319	8439	8559
13	8680	8800	8920	9040	9160	9281	9401	9521	9641	9761
14	9881	0̄002	0̄122	0̄242	0̄362	0̄482	0̄602	0̄723	0̄843	0̄963
15	558 1083	1203	1323	1443	1564	1684	1804	1924	2044	2164
16	2284	2404	2524	2645	2765	2885	3005	3125	3245	3365
17	3485	3605	3725	3845	3965	4085	4205	4325	4446	4566
18	4686	4806	4926	5046	5166	5286	5406	5526	5646	5766
19	5886	6006	6126	6246	6366	6486	6606	6726	6846	6966
3620	558 7086	7206	7326	7446	7566	7686	7805	7925	8045	8165
21	8285	8405	8525	8645	8765	8885	9005	9125	9245	9365
22	9484	9604	9724	9844	9964	0̄084	0̄204	0̄324	0̄444	0̄563
23	559 0683	0803	0923	1043	1163	1283	1403	1522	1642	1762
24	1882	2002	2122	2241	2361	2481	2601	2721	2840	2960
25	3080	3200	3320	3440	3559	3679	3799	3919	4038	4158
26	4278	4398	4518	4637	4757	4877	4997	5116	5236	5356
27	5476	5595	5715	5835	5954	6074	6194	6314	6433	6553
28	6673	6792	6912	7032	7152	7271	7391	7511	7630	7750
29	7870	7989	8109	8229	8348	8468	8588	8707	8827	8947
3630	559 9066	9186	9306	9425	9545	9664	9784	9904	0̄023	0̄143
31	560 0262	0382	0502	0621	0741	0860	0980	1100	1219	1339
32	1458	1578	1698	1817	1937	2056	2176	2295	2415	2534
33	2654	2774	2893	3013	3132	3252	3371	3491	3610	3730
34	3849	3969	4088	4208	4327	4447	4566	4686	4805	4925
35	5044	5164	5283	5403	5522	5641	5761	5880	6000	6119
36	6239	6358	6478	6597	6716	6836	6955	7075	7194	7314
37	7433	7552	7672	7791	7911	8030	8149	8269	8388	8508
38	8627	8746	8866	8985	9104	9224	9343	9463	9582	9701
39	9821	9940	0̄059	0̄179	0̄298	0̄417	0̄537	0̄656	0̄775	0̄895
3640	561 1014	1133	1252	1372	1491	1610	1730	1849	1968	2088
41	2207	2326	2445	2565	2684	2803	2922	3042	3161	3280
42	3399	3519	3638	3757	3876	3996	4115	4234	4353	4472
43	4592	4711	4830	4949	5069	5188	5307	5426	5545	5665
44	5784	5903	6022	6141	6260	6380	6499	6618	6737	6856
45	6975	7094	7214	7333	7452	7571	7690	7809	7928	8048
46	8167	8286	8405	8524	8643	8762	8881	9000	9119	9239
47	9358	9477	9596	9715	9834	9953	0̄072	0̄191	0̄310	0̄429
48	562 0548	0667	0786	0905	1024	1144	1263	1382	1501	1620
49	1739	1858	1977	2096	2215	2334	2453	2572	2691	2810
3650	562 2929	3048	3167	3286	3405	3524	3642	3761	3880	3999
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	121
1	12.1
2	24.2
3	36.3
4	48.4
5	60.5
6	72.6
7	84.7
8	96.8
9	108.9

	120
1	12.0
2	24.0
3	36.0
4	48.0
5	60.0
6	72.0
7	84.0
8	96.0
9	108.0

	119
1	11.9
2	23.8
3	35.7
4	47.6
5	59.5
6	71.4
7	83.3
8	95.2
9	107.1

36000″ = 10° 0′ 0″	3600″ = 1° 0′ 0″	S. 4.685 5528	T. 6190
36100 = 10 1 40	3610 = 1 0 10	5527	6192
36200 = 10 3 20	3620 = 1 0 20	5526	6195
36300 = 10 5 0	3630 = 1 0 30	5524	6197
36400 = 10 6 40	3640 = 1 0 40	5523	6200

N.	0	1	2	3	4	5	6	7	8	9	P. P.
3650	562 2929	3048	3167	3286	3405	3524	3642	3761	3880	3999	
51	4118	4237	4356	4475	4594	4713	4832	4951	5070	5189	
52	5308	5427	5546	5664	5783	5902	6021	6140	6259	6378	
53	6497	6616	6734	6853	6972	7091	7210	7329	7448	7567	
54	7685	7804	7923	8042	8161	8280	8398	8517	8636	8755	
55	8874	8993	9111	9230	9349	9468	9587	9705	9824	9943	
56	563 0062	0181	0299	0418	0537	0656	0775	0893	1012	1131	119
57	1250	1368	1487	1606	1725	1843	1962	2081	2200	2318	1 11.9
58	2437	2556	2674	2793	2912	3031	3149	3268	3387	3505	2 23.8
59	3624	3743	3861	3980	4099	4218	4336	4455	4574	4692	3 35.7
3660	563 4811	4930	5048	5167	5285	5404	5523	5641	5760	5879	4 47.6 5 59.5
61	5997	6116	6235	6353	6472	6590	6709	6828	6946	7065	6 71.4
62	7183	7302	7421	7539	7658	7776	7895	8013	8132	8251	7 83.3
63	8369	8488	8606	8725	8843	8962	9081	9199	9318	9436	8 95.2
64	9555	9673	9792	9910	$\bar{0}$029	$\bar{0}$147	$\bar{0}$266	$\bar{0}$384	$\bar{0}$503	$\bar{0}$621	9 107.1
65	564 0740	0858	0977	1095	1214	1332	1451	1569	1688	1806	
66	1925	2043	2162	2280	2398	2517	2635	2754	2872	2991	
67	3109	3228	3346	3464	3583	3701	3820	3938	4056	4175	
68	4293	4412	4530	4648	4767	4885	5004	5122	5240	5359	
69	5477	5595	5714	5832	5951	6069	6187	6306	6424	6542	
3670	564 6661	6779	6897	7016	7134	7252	7371	7489	7607	7726	
71	7844	7962	8080	8199	8317	8435	8554	8672	8790	8908	118
72	9027	9145	9263	9382	9500	9618	9736	9855	9973	$\bar{0}$091	1 11.8
73	565 0209	0328	0446	0564	0682	0800	0919	1037	1155	1273	2 23.6
74	1392	1510	1628	1746	1864	1983	2101	2219	2337	2455	3 35.4
75	2573	2692	2810	2928	3046	3164	3282	3401	3519	3637	4 47.2
76	3755	3873	3991	4109	4228	4346	4464	4582	4700	4818	5 59.0 6 70.8
77	4936	5054	5173	5291	5409	5527	5645	5763	5881	5999	7 82.6
78	6117	6235	6353	6471	6590	6708	6826	6944	7062	7180	8 94.4
79	7298	7416	7534	7652	7770	7888	8006	8124	8242	8360	9 106.2
3680	565 8478	8596	8714	8832	8950	9068	9186	9304	9422	9540	
81	9658	9776	9894	$\bar{0}$012	$\bar{0}$130	$\bar{0}$248	$\bar{0}$366	$\bar{0}$484	$\bar{0}$602	$\bar{0}$720	
82	566 0838	0956	1074	1192	1310	1428	1545	1663	1781	1899	
83	2017	2135	2253	2371	2489	2607	2725	2843	2960	3078	
84	3196	3314	3432	3550	3668	3786	3903	4021	4139	4257	
85	4375	4493	4611	4728	4846	4964	5082	5200	5318	5435	
86	5553	5671	5789	5907	6025	6142	6260	6378	6496	6614	117
87	6731	6849	6967	7085	7203	7320	7438	7556	7674	7791	1 11.7
88	7909	8027	8145	8262	8380	8498	8616	8733	8851	8969	2 23.4
89	9087	9204	9322	9440	9557	9675	9793	9911	$\bar{0}$028	$\bar{0}$146	3 35.1
3690	567 0264	0381	0499	0617	0734	0852	0970	1087	1205	1323	4 46.8 5 58.5
91	1440	1558	1676	1793	1911	2029	2146	2264	2382	2499	6 70.2
92	2617	2735	2852	2970	3087	3205	3323	3440	3558	3675	7 81.9
93	3793	3911	4028	4146	4263	4381	4499	4616	4734	4851	8 93.6
94	4969	5086	5204	5322	5439	5557	5674	5792	5909	6027	9 105.3
95	6144	6262	6379	6497	6615	6732	6850	6967	7085	7202	
96	7320	7437	7555	7672	7790	7907	8025	8142	8260	8377	
97	8495	8612	8729	8847	8964	9082	9199	9317	9434	9552	
98	9669	9787	9904	$\bar{0}$021	$\bar{0}$139	$\bar{0}$256	$\bar{0}$374	$\bar{0}$491	$\bar{0}$608	$\bar{0}$726	
99	568 0843	0961	1078	1196	1313	1430	1548	1665	1782	1900	
3700	568 2017	2135	2252	2369	2487	2604	2721	2839	2956	3074	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

36500″ = 10° 8′ 20″ 3650″ = 1° 0′ 50″ S. 4.685 5522 T. 6202
36600 = 10 10 0 3660 = 1 1 0 5521 6205
36700 = 10 11 40 3670 = 1 1 10 5520 6207
36800 = 10 13 20 3680 = 1 1 20 5518 6209
36900 = 10 15 0 3690 = 1 1 30 5516 6212

N.	0	1	2	3	4	5	6	7	8	9
3700	568 2017	2135	2252	2369	2487	2604	2721	2839	2956	3074
01	3191	3308	3426	3543	3660	3778	3895	4012	4130	4247
02	4364	4481	4599	4716	4833	4951	5068	5185	5303	5420
03	5537	5654	5772	5889	6006	6123	6241	6358	6475	6593
04	6710	6827	6944	7062	7179	7296	7413	7530	7648	7765
05	7882	7999	8117	8234	8351	8468	8585	8703	8820	8937
06	9054	9171	9289	9406	9523	9640	9757	9874	9992	$\bar{0}109$
07	569 0226	0343	0460	0577	0694	0812	0929	1046	1163	1280
08	1397	1514	1631	1749	1866	1983	2100	2217	2334	2451
09	2568	2685	2803	2920	3037	3154	3271	3388	3505	3622
3710	569 3739	3856	3973	4090	4207	4324	4441	4558	4675	4793
11	4910	5027	5144	5261	5378	5495	5612	5729	5846	5963
12	6080	6197	6314	6431	6548	6665	6782	6899	7016	7133
13	7249	7366	7483	7600	7717	7834	7951	8068	8185	8302
14	8419	8536	8653	8770	8887	9004	9121	9237	9354	9471
15	9588	9705	9822	9939	$\bar{0}056$	$\bar{0}173$	$\bar{0}290$	$\bar{0}406$	$\bar{0}523$	$\bar{0}640$
16	570 0757	0874	0991	1108	1225	1341	1458	1575	1692	1809
17	1926	2042	2159	2276	2393	2510	2627	2743	2860	2977
18	3094	3211	3327	3444	3561	3678	3795	3911	4028	4145
19	4262	4379	4495	4612	4729	4846	4962	5079	5196	5313
3720	570 5429	5546	5663	5780	5896	6013	6130	6247	6363	6480
21	6597	6713	6830	6947	7064	7180	7297	7414	7530	7647
22	7764	7880	7997	8114	8230	8347	8464	8580	8697	8814
23	8930	9047	9164	9280	9397	9514	9630	9747	9863	9980
24	571 0097	0213	0330	0447	0563	0680	0796	0913	1030	1146
25	1263	1379	1496	1613	1729	1846	1962	2079	2195	2312
26	2429	2545	2662	2778	2895	3011	3128	3244	3361	3477
27	3594	3710	3827	3943	4060	4177	4293	4410	4526	4643
28	4759	4876	4992	5109	5225	5341	5458	5574	5691	5807
29	5924	6040	6157	6273	6390	6506	6623	6739	6855	6972
3730	571 7088	7205	7321	7438	7554	7670	7787	7903	8020	8136
31	8252	8369	8485	8602	8718	8834	8951	9067	9184	9300
32	9416	9533	9649	9765	9882	9998	$\bar{0}115$	$\bar{0}231$	$\bar{0}347$	$\bar{0}464$
33	572 0580	0696	0813	0929	1045	1162	1278	1394	1511	1627
34	1743	1859	1976	2092	2208	2325	2441	2557	2674	2790
35	2906	3022	3139	3255	3371	3487	3604	3720	3836	3952
36	4069	4185	4301	4417	4534	4650	4766	4882	4999	5115
37	5231	5347	5463	5580	5696	5812	5928	6044	6161	6277
38	6393	6509	6625	6742	6858	6974	7090	7206	7322	7438
39	7555	7671	7787	7903	8019	8135	8252	8368	8484	8600
3740	572 8716	8832	8948	9064	9180	9297	9413	9529	9645	9761
41	9877	9993	$\bar{0}109$	$\bar{0}225$	$\bar{0}341$	$\bar{0}457$	$\bar{0}574$	$\bar{0}690$	$\bar{0}806$	$\bar{0}922$
42	573 1038	1154	1270	1386	1502	1618	1734	1850	1966	2082
43	2198	2314	2430	2546	2662	2778	2894	3010	3126	3242
44	3358	3474	3590	3706	3822	3938	4054	4170	4286	4402
45	4518	4634	4750	4866	4982	5098	5214	5330	5446	5562
46	5678	5794	5910	6026	6141	6257	6373	6489	6605	6721
47	6837	6953	7069	7185	7301	7416	7532	7648	7764	7880
48	7996	8112	8228	8343	8459	8575	8691	8807	8923	9039
49	9154	9270	9386	9502	9618	9734	9849	9965	$\bar{0}081$	$\bar{0}197$
3750	574 0313	0428	0544	0660	0776	0892	1007	1123	1239	1355
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	118
1	11.8
2	23.6
3	35.4
4	47.2
5	59.0
6	70.8
7	82.6
8	94.4
9	106.2

	117
1	11.7
2	23.4
3	35.1
4	46.8
5	58.5
6	70.2
7	81.9
8	93.6
9	105.3

	116
1	11.6
2	23.2
3	34.8
4	46.4
5	58.0
6	69.6
7	81.2
8	92.8
9	104.4

P. P.

37000″ = 10° 16′ 40″	3700″ = 1° 1′ 40″	S. 4.685 5516	T. 6215
37100 = 10 18 20	3710 = 1 1 50	5514	6217
37200 = 10 20 0	3720 = 1 2 0	5513	6220
37300 = 10 21 40	3730 = 1 2 10	5512	6222
37400 = 10 23 20	3740 = 1 2 20	5511	6225

N.	0	1	2	3	4	5	6	7	8	9	P. P.
3750	574 0313	0428	0544	0660	0776	0892	1007	1123	1239	1355	
51	1471	1586	1702	1818	1934	2050	2165	2281	2397	2513	
52	2628	2744	2860	2976	3091	3207	3323	3438	3554	3670	
53	3786	3901	4017	4133	4248	4364	4480	4596	4711	4827	
54	4943	5058	5174	5290	5405	5521	5637	5752	5868	5984	
55	6099	6215	6331	6446	6562	6678	6793	6909	7025	7140	
56	7256	7371	7487	7603	7718	7834	7950	8065	8181	8296	116
57	8412	8528	8643	8759	8874	8990	9105	9221	9337	9452	1 11.6
58	9568	9683	9799	9914	0̄030	0̄146	0̄261	0̄377	0̄492	0̄608	2 23.2
59	575 0723	0839	0954	1070	1185	1301	1416	1532	1647	1763	3 34.8
3760	575 1878	1994	2109	2225	2340	2456	2571	2687	2802	2918	4 46.4 5 58.0
61	3033	3149	3264	3380	3495	3611	3726	3842	3957	4072	6 69.6
62	4188	4303	4419	4534	4650	4765	4881	4996	5111	5227	7 81.2
63	5342	5458	5573	5688	5804	5919	6035	6150	6265	6381	8 92.8
64	6496	6612	6727	6842	6958	7073	7188	7304	7419	7534	9 104.4
65	7650	7765	7881	7996	8111	8227	8342	8457	8573	8688	
66	8803	8918	9034	9149	9264	9380	9495	9610	9726	9841	
67	9956	0̄071	0̄187	0̄302	0̄417	0̄533	0̄648	0̄763	0̄878	0̄994	
68	576 1109	1224	1339	1455	1570	1685	1800	1916	2031	2146	
69	2261	2377	2492	2607	2722	2837	2953	3068	3183	3298	
3770	576 3414	3529	3644	3759	3874	3989	4105	4220	4335	4450	
71	4565	4680	4796	4911	5026	5141	5256	5371	5487	5602	115
72	5717	5832	5947	6062	6177	6292	6408	6523	6638	6753	1 11.5
73	6868	6983	7098	7213	7328	7444	7559	7674	7789	7904	2 23.0
74	8019	8134	8249	8364	8479	8594	8709	8824	8939	9055	3 34.5
75	9170	9285	9400	9515	9630	9745	9860	9975	0̄090	0̄205	4 46.0
76	577 0320	0435	0550	0665	0780	0895	1010	1125	1240	1355	5 57.5 6 69.0
77	1470	1585	1700	1815	1930	2045	2160	2275	2390	2505	7 80.5
78	2620	2734	2849	2964	3079	3194	3309	3424	3539	3654	8 92.0
79	3769	3884	3999	4114	4229	4343	4458	4573	4688	4803	9 103.5
3780	577 4918	5033	5148	5263	5378	5492	5607	5722	5837	5952	
81	6067	6182	6296	6411	6526	6641	6756	6871	6986	7100	
82	7215	7330	7445	7560	7675	7789	7904	8019	8134	8249	
83	8363	8478	8593	8708	8823	8937	9052	9167	9282	9397	
84	9511	9626	9741	9856	9970	0̄085	0̄200	0̄315	0̄429	0̄544	
85	578 0659	0774	0888	1003	1118	1233	1347	1462	1577	1691	
86	1806	1921	2036	2150	2265	2380	2494	2609	2724	2838	114
87	2953	3068	3182	3297	3412	3526	3641	3756	3870	3985	1 11.4
88	4100	4214	4329	4444	4558	4673	4788	4902	5017	5131	2 22.8
89	5246	5361	5475	5590	5705	5819	5934	6048	6163	6278	3 34.2
3790	578 6392	6507	6621	6736	6850	6965	7080	7194	7309	7423	4 45.6 5 57.0
91	7538	7652	7767	7882	7996	8111	8225	8340	8454	8569	6 68.4
92	8683	8798	8912	9027	9141	9256	9370	9485	9599	9714	7 79.8
93	9828	9943	0̄057	0̄172	0̄286	0̄401	0̄515	0̄630	0̄744	0̄859	8 91.2
94	579 0973	1088	1202	1317	1431	1546	1660	1774	1889	2003	9 102.6
95	2118	2232	2347	2461	2576	2690	2804	2919	3033	3148	
96	3262	3376	3491	3605	3720	3834	3948	4063	4177	4292	
97	4406	4520	4635	4749	4863	4978	5092	5207	5321	5435	
98	5550	5664	5778	5893	6007	6121	6236	6350	6464	6579	
99	6693	6807	6922	7036	7150	7264	7379	7493	7607	7722	
3800	579 7836	7950	8065	8179	8293	8407	8522	8636	8750	8864	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

37500″ = 10°25′ 0″ 3750″ = 1° 2′ 30″ S. 4.685 5509 T. 6227
37600 = 10 26 40 3760 = 1 2 40 5508 6230
37700 = 10 28 20 3770 = 1 2 50 5507 6232
37800 = 10 30 0 3780 = 1 3 0 5506 6235
37900 = 10 31 40 3790 = 1 3 10 5504 6237

N.	0	1	2	3	4	5	6	7	8	9	P. P.
3800	579 7836	7950	8065	8179	8293	8407	8522	8636	8750	8864	
01	8979	9093	9207	9321	9436	9550	9664	9778	9893	0̄007	
02	580 0121	0235	0350	0464	0578	0692	0806	0921	1035	1149	
03	1263	1377	1492	1606	1720	1834	1948	2063	2177	2291	
04	2405	2519	2633	2748	2862	2976	3090	3204	3318	3432	
05	3547	3661	3775	3889	4003	4117	4231	4346	4460	4574	
06	4688	4802	4916	5030	5144	5258	5372	5487	5601	5715	115
07	5829	5943	6057	6171	6285	6399	6513	6627	6741	6855	1 11.5
08	6969	7083	7197	7312	7426	7540	7654	7768	7882	7996	2 23.0
09	8110	8224	8338	8452	8566	8680	8794	8908	9022	9136	3 34.5
3810	580 9250	9364	9478	9592	9706	9820	9934	0̄048	0̄162	0̄276	4 46.0
11	581 0389	0503	0617	0731	0845	0959	1073	1187	1301	1415	5 57.5 6 69.0
12	1529	1643	1757	1871	1985	2099	2212	2326	2440	2554	7 80.5
13	2668	2782	2896	3010	3124	3238	3351	3465	3579	3693	8 92.0
14	3807	3921	4035	4148	4262	4376	4490	4604	4718	4832	9 103.5
15	4945	5059	5173	5287	5401	5515	5628	5742	5856	5970	
16	6084	6197	6311	6425	6539	6653	6766	6880	6994	7108	
17	7222	7335	7449	7563	7677	7790	7904	8018	8152	8245	
18	8359	8473	8587	8700	8814	8928	9042	9155	9269	9383	
19	9497	9610	9724	9838	9951	0̄065	0̄179	0̄293	0̄406	0̄520	
3820	582 0634	0747	0861	0975	1088	1202	1316	1429	1543	1657	
21	1770	1884	1998	2111	2225	2339	2452	2566	2680	2793	114
22	2907	3020	3134	3248	3361	3475	3589	3702	3816	3929	1 11.4
23	4043	4157	4270	4384	4497	4611	4725	4838	4952	5065	2 22.8
24	5179	5292	5406	5520	5633	5747	5860	5974	6087	6201	3 34.2
25	6314	6428	6541	6655	6769	6882	6996	7109	7223	7336	4 45.6
26	7450	7563	7677	7790	7904	8017	8131	8244	8358	8471	5 57.0 6 68.4
27	8585	8698	8812	8925	9039	9152	9265	9379	9492	9606	7 79.8
28	9719	9833	9946	0̄060	0̄173	0̄287	0̄400	0̄513	0̄627	0̄740	8 91.2
29	583 0854	0967	1081	1194	1307	1421	1534	1648	1761	1874	9 102.6
3830	583 1988	2101	2215	2328	2441	2555	2668	2781	2895	3008	
31	3122	3235	3348	3462	3575	3688	3802	3915	4028	4142	
32	4255	4368	4482	4595	4708	4822	4935	5048	5162	5275	
33	5388	5501	5615	5728	5841	5955	6068	6181	6295	6408	
34	6521	6634	6748	6861	6974	7087	7201	7314	7427	7540	
35	7654	7767	7880	7993	8107	8220	8333	8446	8560	8673	
36	8786	8899	9012	9126	9239	9352	9465	9578	9692	9805	113
37	9918	0̄031	0̄144	0̄258	0̄371	0̄484	0̄597	0̄710	0̄823	0̄937	1 11.3
38	584 1050	1163	1276	1389	1502	1615	1729	1842	1955	2068	2 22.6
39	2181	2294	2407	2520	2634	2747	2860	2973	3086	3199	3 33.9
3840	584 3312	3425	3538	3652	3765	3878	3991	4104	4217	4330	4 45.2
41	4443	4556	4669	4782	4895	5008	5121	5234	5348	5461	5 56.5 6 67.8
42	5574	5687	5800	5913	6026	6139	6252	6365	6478	6591	7 79.1
43	6704	6817	6930	7043	7156	7269	7382	7495	7608	7721	8 90.4
44	7834	7947	8060	8173	8286	8399	8512	8625	8738	8850	9 101.7
45	8963	9076	9189	9302	9415	9528	9641	9754	9867	9980	
46	585 0093	0206	0319	0432	0544	0657	0770	0883	0996	1109	
47	1222	1335	1448	1561	1673	1786	1899	2012	2125	2238	
48	2351	2463	2576	2689	2802	2915	3028	3141	3253	3366	
49	3479	3592	3705	3818	3930	4043	4156	4269	4382	4494	
3850	585 4607	4720	4833	4946	5058	5171	5284	5397	5510	5622	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

38000″ = 10° 33′ 20″	3800″ = 1° 3′ 20″	S. 4.685 5503	T. 6240
38100 = 10 35 0	3810 = 1 3 30	5502	6243
38200 = 10 36 40	3820 = 1 3 40	5500	6245
38300 = 10 38 20	3830 = 1 3 50	5499	6248
38400 = 10 40 0	3840 = 1 4	5498	6250

N.	0	1	2	3	4	5	6	7	8	9	P. P.
3850	585 4607	4720	4833	4946	5058	5171	5284	5397	5510	5622	
51	5735	5848	5961	6073	6186	6299	6412	6525	6637	6750	
52	6863	6976	7088	7201	7314	7426	7539	7652	7765	7877	
53	7990	8103	8216	8328	8441	8554	8666	8779	8892	9004	
54	9117	9230	9342	9455	9568	9681	9793	9906	0̄019	0̄131	
55	586 0244	0356	0469	0582	0694	0807	0920	1032	1145	1258	
56	1370	1483	1596	1708	1821	1933	2046	2159	2271	2384	113
57	2496	2609	2722	2834	2947	3059	3172	3285	3397	3510	1 11.3
58	3622	3735	3847	3960	4072	4185	4298	4410	4523	4635	2 22.6
59	4748	4860	4973	5085	5198	5310	5423	5535	5648	5761	3 33.9
3860	586 5873	5986	6098	6211	6323	6436	6548	6661	6773	6886	4 45.2 5 56.5
61	6998	7110	7223	7335	7448	7560	7673	7785	7898	8010	6 67.8
62	8123	8235	8348	8460	8572	8685	8797	8910	9022	9135	7 79.1
63	9247	9360	9472	9584	9697	9809	9922	0̄034	0̄146	0̄259	8 90.4
64	587 0371	0484	0596	0708	0821	0933	1045	1158	1270	1383	9 101.7
65	1495	1607	1720	1832	1944	2057	2169	2281	2394	2506	
66	2618	2731	2843	2955	3068	3180	3292	3405	3517	3629	
67	3742	3854	3966	4079	4191	4303	4416	4528	4640	4752	
68	4865	4977	5089	5201	5314	5426	5538	5651	5763	5875	
69	5987	6100	6212	6324	6436	6549	6661	6773	6885	6997	
3870	587 7110	7222	7334	7446	7559	7671	7783	7895	8007	8120	
71	8232	8344	8456	8568	8680	8793	8905	9017	9129	9241	112
72	9353	9466	9578	9690	9802	9914	0̄026	0̄139	0̄251	0̄363	1 11.2
73	588 0475	0587	0699	0811	0923	1036	1148	1260	1372	1484	2 22.4
74	1596	1708	1820	1932	2045	2157	2269	2381	2493	2605	3 33.6
75	2717	2829	2941	3053	3165	3277	3389	3502	3614	3726	4 44.8
76	3838	3950	4062	4174	4286	4398	4510	4622	4734	4846	5 56.0 6 67.2
77	4958	5070	5182	5294	5406	5518	5630	5742	5854	5966	7 78.4
78	6078	6190	6302	6414	6526	6638	6750	6862	6974	7086	8 89.6
79	7198	7310	7422	7534	7646	7758	7870	7981	8093	8205	9 100.8
3880	588 8317	8429	8541	8653	8765	8877	8989	9101	9213	9325	
81	9436	9548	9660	9772	9884	9996	0̄108	0̄220	0̄332	0̄443	
82	589 0555	0667	0779	0891	1003	1115	1227	1338	1450	1562	
83	1674	1786	1898	2009	2121	2233	2345	2457	2569	2680	
84	2792	2904	3016	3128	3239	3351	3463	3575	3687	3798	
85	3910	4022	4134	4246	4357	4469	4581	4693	4804	4916	
86	5028	5140	5251	5363	5475	5587	5698	5810	5922	6034	111
87	6145	6257	6369	6481	6592	6704	6816	6927	7039	7151	1 11.1
88	7263	7374	7486	7598	7709	7821	7933	8044	8156	8268	2 22.2
89	8379	8491	8603	8714	8826	8938	9049	9161	9273	9384	3 33.3
3890	589 9496	9608	9719	9831	9943	0̄054	0̄166	0̄277	0̄389	0̄501	4 44.4 5 55.5
91	590 0612	0724	0836	0947	1059	1170	1282	1394	1505	1617	6 66.6
92	1728	1840	1951	2063	2175	2286	2398	2509	2621	2732	7 77.7
93	2844	2956	3067	3179	3290	3402	3513	3625	3736	3848	8 88.8
94	3959	4071	4183	4294	4406	4517	4629	4740	4852	4963	9 99.9
95	5075	5186	5298	5409	5521	5632	5744	5855	5967	6078	
96	6189	6301	6412	6524	6635	6747	6858	6970	7081	7193	
97	7304	7415	7527	7638	7750	7861	7973	8084	8196	8307	
98	8418	8530	8641	8753	8864	8975	9087	9198	9310	9421	
99	9532	9644	9755	9866	9978	0̄089	0̄201	0̄312	0̄423	0̄535	
3900	591 0646	0757	0869	0980	1091	1203	1314	1426	1537	1648	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

38500″ = 10°41′40″ 3850″ = 1° 4′10″ S. 4.685 5496 T. 6253
38600 = 10 43 20 3860 = 1 4 20 5495 6256
38700 = 10 45 0 3870 = 1 4 30 5494 6258
38800 = 10 46 40 3880 = 1 4 40 5493 6261
38900 = 10 48 20 3890 = 1 4 50 5491 6264

N.	0	1	2	3	4	5	6	7	8	9
3900	591 0646	0757	0869	0980	1091	1203	1314	1426	1537	1648
01	1760	1871	1982	2093	2205	2316	2427	2539	2650	2761
02	2873	2984	3095	3207	3318	3429	3540	3652	3763	3874
03	3986	4097	4208	4319	4431	4542	4653	4764	4876	4987
04	5098	5209	5321	5432	5543	5654	5765	5877	5988	6099
05	6210	6322	6433	6544	6655	6766	6878	6989	7100	7211
06	7322	7434	7545	7656	7767	7878	7989	8101	8212	8323
07	8434	8545	8656	8768	8879	8990	9101	9212	9323	9434
08	9546	9657	9768	9879	9990	0̄101	0̄212	0̄323	0̄434	0̄546
09	592 0657	0768	0879	0990	1101	1212	1323	1434	1545	1656
3910	592 1768	1879	1990	2101	2212	2323	2434	2545	2656	2767
11	2878	2989	3100	3211	3322	3433	3544	3655	3766	3877
12	3988	4099	4210	4321	4433	4544	4655	4766	4876	4987
13	5098	5209	5320	5431	5542	5653	5764	5875	5986	6097
14	6208	6319	6430	6541	6652	6763	6874	6985	7096	7207
15	7318	7429	7540	7650	7761	7872	7983	8094	8205	8316
16	8427	8538	8649	8760	8870	8981	9092	9203	9314	9425
17	9536	9647	9757	9868	9979	0̄090	0̄201	0̄312	0̄423	0̄533
18	593 0644	0755	0866	0977	1088	1199	1309	1420	1531	1642
19	1753	1863	1974	2085	2196	2307	2417	2528	2639	2750
3920	593 2861	2971	3082	3193	3304	3415	3525	3636	3747	3858
21	3968	4079	4190	4301	4411	4522	4633	4744	4854	4965
22	5076	5187	5297	5408	5519	5630	5740	5851	5962	6072
23	6183	6294	6404	6515	6626	6737	6847	6958	7069	7179
24	7290	7401	7511	7622	7733	7843	7954	8065	8175	8286
25	8397	8507	8618	8729	8839	8950	9060	9171	9282	9392
26	9503	9614	9724	9835	9945	0̄056	0̄167	0̄277	0̄388	0̄498
27	594 0609	0720	0830	0941	1051	1162	1273	1383	1494	1604
28	1715	1825	1936	2046	2157	2268	2378	2489	2599	2710
29	2820	2931	3041	3152	3262	3373	3483	3594	3704	3815
3930	594 3926	4036	4147	4257	4368	4478	4588	4699	4809	4920
31	5030	5141	5251	5362	5472	5583	5693	5804	5914	6025
32	6135	6246	6356	6466	6577	6687	6798	6908	7019	7129
33	7239	7350	7460	7571	7681	7792	7902	8012	8123	8233
34	8344	8454	8564	8675	8785	8895	9006	9116	9227	9337
35	9447	9558	9668	9778	9889	9999	0̄110	0̄220	0̄330	0̄441
36	595 0551	0661	0772	0882	0992	1103	1213	1323	1434	1544
37	1654	1764	1875	1985	2095	2206	2316	2426	2537	2647
38	2757	2867	2978	3088	3198	3308	3419	3529	3639	3750
39	3860	3970	4080	4191	4301	4411	4521	4632	4742	4852
3940	595 4962	5072	5183	5293	5403	5513	5624	5734	5844	5954
41	6064	6175	6285	6395	6505	6615	6725	6836	6946	7056
42	7166	7276	7387	7497	7607	7717	7827	7937	8047	8158
43	8268	8378	8488	8598	8708	8818	8929	9039	9149	9259
44	9369	9479	9589	9699	9810	9920	0̄030	0̄140	0̄250	0̄360
45	596 0470	0580	0690	0800	0910	1020	1131	1241	1351	1461
46	1571	1681	1791	1901	2011	2121	2231	2341	2451	2561
47	2671	2781	2891	3001	3111	3221	3331	3441	3551	3661
48	3771	3881	3991	4101	4211	4321	4431	4541	4651	4761
49	4871	4981	5091	5201	5311	5421	5531	5641	5751	5861
3950	596 5971	6081	6191	6301	6411	6521	6631	6741	6850	6960
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	112
1	11.2
2	22.4
3	33.6
4	44.8
5	56.0
6	67.2
7	78.4
8	89.6
9	100.8

	111
1	11.1
2	22.2
3	33.3
4	44.4
5	55.5
6	66.6
7	77.7
8	88.8
9	99.9

	110
1	11.0
2	22.0
3	33.0
4	44.0
5	55.0
6	66.0
7	77.0
8	88.0
9	99.0

P. P.

39000″ = 10° 50′ 0″	3900″ = 1° 5′ 0″	S. 4.685 5490	T. 6266
39100 = 10 51 40	3910 = 1 5 10	5489	6269
39200 = 10 53 20	3920 = 1 5 20	5487	6272
39300 = 10 55 0	3930 = 1 5 30	5486	6274
39400 = 10 56 40	3940 = 1 5 40	5485	6277

N.	0	1	2	3	4	5	6	7	8	9
3950	596 5971	6081	6191	6301	6411	6521	6631	6741	6850	6960
51	7070	7180	7290	7400	7510	7620	7730	7840	7950	8059
52	8169	8279	8389	8499	8609	8719	8829	8939	9048	9158
53	9268	9378	9488	9598	9708	9817	9927	0̄037	0̄147	0̄257
54	597 0367	0476	0586	0696	0806	0916	1026	1135	1245	1355
55	1465	1575	1684	1794	1904	2014	2124	2233	2343	2453
56	2563	2673	2782	2892	3002	3112	3221	3331	3441	3551
57	3661	3770	3880	3990	4099	4209	4319	4429	4538	4648
58	4758	4868	4977	5087	5197	5306	5416	5526	5636	5745
59	5855	5965	6074	6184	6294	6403	6513	6623	6733	6842
3960	597 6952	7062	7171	7281	7391	7500	7610	7719	7829	7939
61	8048	8158	8268	8377	8487	8597	8706	8816	8925	9035
62	9145	9254	9364	9474	9583	9693	9802	9912	0̄022	0̄131
63	598 0241	0350	0460	0569	0679	0789	0898	1008	1117	1227
64	1336	1446	1556	1665	1775	1884	1994	2103	2213	2322
65	2432	2541	2651	2761	2870	2980	3089	3199	3308	3418
66	3527	3637	3746	3856	3965	4075	4184	4294	4403	4513
67	4622	4731	4841	4950	5060	5169	5279	5388	5498	5607
68	5717	5826	5936	6045	6154	6264	6373	6483	6592	6702
69	6811	6920	7030	7139	7249	7358	7467	7577	7686	7796
3970	598 7905	8014	8124	8233	8343	8452	8561	8671	8780	8890
71	8999	9108	9218	9327	9436	9546	9655	9764	9874	9983
72	599 0092	0202	0311	0420	0530	0639	0748	0858	0967	1076
73	1186	1295	1404	1514	1623	1732	1841	1951	2060	2169
74	2279	2388	2497	2606	2716	2825	2934	3044	3153	3262
75	3371	3481	3590	3699	3808	3918	4027	4136	4245	4355
76	4464	4573	4682	4791	4901	5010	5119	5228	5338	5447
77	5556	5665	5774	5884	5993	6102	6211	6320	6429	6539
78	6648	6757	6866	6975	7084	7194	7303	7412	7521	7630
79	7739	7849	7958	8067	8176	8285	8394	8503	8612	8722
3980	599 8831	8940	9049	9158	9267	9376	9485	9594	9704	9813
81	9922	0̄031	0̄140	0̄249	0̄358	0̄467	0̄576	0̄685	0̄794	0̄903
82	600 1013	1122	1231	1340	1449	1558	1667	1776	1885	1994
83	2103	2212	2321	2430	2539	2648	2757	2866	2975	3084
84	3193	3302	3411	3520	3629	3738	3847	3956	4065	4174
85	4283	4392	4501	4610	4719	4828	4937	5046	5155	5264
86	5373	5482	5591	5700	5809	5918	6027	6136	6244	6353
87	6462	6571	6680	6789	6898	7007	7116	7225	7334	7443
88	7551	7660	7769	7878	7987	8096	8205	8314	8423	8531
89	8640	8749	8858	8967	9076	9185	9294	9402	9511	9620
3990	600 9729	9838	9947	0̄055	0̄164	0̄273	0̄382	0̄491	0̄600	0̄708
91	601 0817	0926	1035	1144	1253	1361	1470	1579	1688	1797
92	1905	2014	2123	2232	2340	2449	2558	2667	2776	2884
93	2993	3102	3211	3319	3428	3537	3646	3754	3863	3972
94	4081	4189	4298	4407	4516	4624	4733	4842	4950	5059
95	5168	5277	5385	5494	5603	5711	5820	5929	6037	6146
96	6255	6363	6472	6581	6690	6798	6907	7016	7124	7233
97	7341	7450	7559	7667	7776	7885	7993	8102	8211	8319
98	8428	8537	8645	8754	8862	8971	9080	9188	9297	9405
99	9514	9623	9731	9840	9948	0̄057	0̄166	0̄274	0̄383	0̄491
4000	602 0600	0708	0817	0926	1034	1143	1251	1360	1468	1577
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	110
1	11.0
2	22.0
3	33.0
4	44.0
5	55.0
6	66.0
7	77.0
8	88.0
9	99.0

	109
1	10.9
2	21.8
3	32.7
4	43.6
5	54.5
6	65.4
7	76.3
8	87.2
9	98.1

	108
1	10.8
2	21.6
3	32.4
4	43.2
5	54.0
6	64.8
7	75.6
8	86.4
9	97.2

P. P.

39500″ = 10° 58′ 20″ 3950″ = 1° 5′ 50″ S. 4.685 5483 T. 6280
39600 = 11 0 0 3960 = 1 6 0 5482 6282
39700 = 11 1 40 3970 = 1 6 10 5481 6285
39800 = 11 3 20 3980 = 1 6 20 5479 6288
39900 = 11 5 0 3990 = 1 6 30 5478 6290

N.	0	1	2	3	4	5	6	7	8	9
4000	602 0600	0708	0817	0926	1034	1143	1251	1360	1468	1577
01	1686	1794	1903	2011	2120	2228	2337	2445	2554	2662
02	2771	2879	2988	3096	3205	3313	3422	3530	3639	3747
03	3856	3964	4073	4181	4290	4398	4507	4615	4724	4832
04	4941	5049	5158	5266	5375	5483	5591	5700	5808	5917
05	6025	6134	6242	6351	6459	6567	6676	6784	6893	7001
06	7109	7218	7326	7435	7543	7651	7760	7868	7977	8085
07	8193	8302	8410	8519	8627	8735	8844	8952	9060	9169
08	9277	9385	9494	9602	9711	9819	9927	0̄036	0̄144	0̄252
09	603 0361	0469	0577	0686	0794	0902	1010	1119	1227	1335
4010	603 1444	1552	1660	1769	1877	1985	2093	2202	2310	2418
11	2527	2635	2743	2851	2960	3068	3176	3284	3393	3501
12	3609	3717	3826	3934	4042	4150	4259	4367	4475	4583
13	4692	4800	4908	5016	5124	5233	5341	5449	5557	5665
14	5774	5882	5990	6098	6206	6315	6423	6531	6639	6747
15	6855	6964	7072	7180	7288	7396	7504	7613	7721	7829
16	7937	8045	8153	8261	8370	8478	8586	8694	8802	8910
17	9018	9126	9235	9343	9451	9559	9667	9775	9883	9991
18	604 0099	0207	0315	0424	0532	0640	0748	0856	0964	1072
19	1180	1288	1396	1504	1612	1720	1828	1936	2044	2152
4020	604 2261	2369	2477	2585	2693	2801	2909	3017	3125	3233
21	3341	3449	3557	3665	3773	3881	3989	4097	4205	4313
22	4421	4529	4637	4745	4853	4961	5068	5176	5284	5392
23	5500	5608	5716	5824	5932	6040	6148	6256	6364	6472
24	6580	6688	6796	6903	7011	7119	7227	7335	7443	7551
25	7659	7767	7875	7983	8090	8198	8306	8414	8522	8630
26	8738	8846	8953	9061	9169	9277	9385	9493	9601	9708
27	9816	9924	0̄032	0̄140	0̄248	0̄355	0̄463	0̄571	0̄679	0̄787
28	605 0895	1002	1110	1218	1326	1434	1541	1649	1757	1865
29	1973	2080	2188	2296	2404	2512	2619	2727	2835	2943
4030	605 3050	3158	3266	3374	3482	3589	3697	3805	3912	4020
31	4128	4236	4343	4451	4559	4667	4774	4882	4990	5098
32	5205	5313	5421	5528	5636	5744	5851	5959	6067	6175
33	6282	6390	6498	6605	6713	6821	6928	7036	7144	7251
34	7359	7467	7574	7682	7790	7897	8005	8112	8220	8328
35	8435	8543	8651	8758	8866	8974	9081	9189	9296	9404
36	9512	9619	9727	9834	9942	0̄050	0̄157	0̄265	0̄372	0̄480
37	606 0587	0695	0803	0910	1018	1125	1233	1340	1448	1556
38	1663	1771	1878	1986	2093	2201	2308	2416	2523	2631
39	2739	2846	2954	3061	3169	3276	3384	3491	3599	3706
4040	606 3814	3921	4029	4136	4244	4351	4459	4566	4674	4781
41	4889	4996	5103	5211	5318	5426	5533	5641	5748	5856
42	5963	6071	6178	6285	6393	6500	6608	6715	6823	6930
43	7037	7145	7252	7360	7467	7574	7682	7789	7897	8004
44	8111	8219	8326	8434	8541	8648	8756	8863	8971	9078
45	9185	9293	9400	9507	9615	9722	9829	9937	0̄044	0̄151
46	607 0259	0366	0473	0581	0688	0795	0903	1010	1117	1225
47	1332	1439	1547	1654	1761	1869	1976	2083	2190	2298
48	2405	2512	2620	2727	2834	2941	3049	3156	3263	3371
49	3478	3585	3692	3800	3907	4014	4121	4229	4336	4443
4050	607 4550	4657	4765	4872	4979	5086	5194	5301	5408	5515
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	109
1	10.9
2	21.8
3	32.7
4	43.6
5	54.5
6	65.4
7	76.3
8	87.2
9	98.1

	108
1	10.8
2	21.6
3	32.4
4	43.2
5	54.0
6	64.8
7	75.6
8	86.4
9	97.2

	107
1	10.7
2	21.4
3	32.1
4	42.8
5	53.5
6	64.2
7	74.9
8	85.6
9	96.3

P. P.

40000″ = 11° 6′ 40″	4000″ = 1° 6′ 40″	S. 4.685 5476	T. 6293
40100 = 11 8 20	4010 = 1 6 50	5475	6296
40200 = 11 10 0	4020 = 1 7 0	5474	6299
40300 = 11 11 40	4030 = 1 7 10	5472	6301
40400 = 11 13 20	4040 = 1 7 20	5471	6304

N	0	1	2	3	4	5	6	7	8	9
4050	607 4550	4657	4765	4872	4979	5086	5194	5301	5408	5515
51	5622	5730	5837	5944	6051	6158	6266	6373	6480	6587
52	6694	6802	6909	7016	7123	7230	7337	7445	7552	7659
53	7766	7873	7980	8087	8195	8302	8409	8516	8623	8730
54	8837	8945	9052	9159	9266	9373	9480	9587	9694	9801
55	9909	0̄016	0̄123	0̄230	0̄337	0̄444	0̄551	0̄658	0̄765	0̄872
56	608 0979	1087	1194	1301	1408	1515	1622	1729	1836	1943
57	2050	2157	2264	2371	2478	2585	2692	2799	2906	3013
58	3120	3227	3334	3441	3548	3656	3763	3870	3977	4084
59	4191	4298	4404	4511	4618	4725	4832	4939	5046	5153
4060	608 5260	5367	5474	5581	5688	5795	5902	6009	6116	6223
61	6330	6437	6544	6651	6758	6865	6972	7078	7185	7292
62	7399	7506	7613	7720	7827	7934	8041	8148	8254	8361
63	8468	8575	8682	8789	8896	9003	9110	9216	9323	9430
64	9537	9644	9751	9858	9964	0̄071	0̄178	0̄285	0̄392	0̄499
65	609 0605	0712	0819	0926	1033	1140	1246	1353	1460	1567
66	1674	1781	1887	1994	2101	2208	2315	2421	2528	2635
67	2742	2849	2955	3062	3169	3276	3382	3489	3596	3703
68	3809	3916	4023	4130	4236	4343	4450	4557	4663	4770
69	4877	4984	5090	5197	5304	5411	5517	5624	5731	5837
4070	609 5944	6051	6157	6264	6371	6478	6584	6691	6798	6904
71	7011	7118	7224	7331	7438	7544	7651	7758	7864	7971
72	8078	8184	8291	8398	8504	8611	8718	8824	8931	9037
73	9144	9251	9357	9464	9571	9677	9784	9890	9997	0̄104
74	610 0210	0317	0423	0530	0637	0743	0850	0956	1063	1170
75	1276	1383	1489	1596	1702	1809	1916	2022	2129	2235
76	2342	2448	2555	2661	2768	2874	2981	3088	3194	3301
77	3407	3514	3620	3727	3833	3940	4046	4153	4259	4366
78	4472	4579	4685	4792	4898	5005	5111	5218	5324	5431
79	5537	5644	5750	5856	5963	6069	6176	6282	6389	6495
4080	610 6602	6708	6815	6921	7027	7134	7240	7347	7453	7560
81	7666	7772	7879	7985	8092	8198	8304	8411	8517	8624
82	8730	8836	8943	9049	9156	9262	9368	9475	9581	9687
83	9794	9900	0̄007	0̄113	0̄219	0̄326	0̄432	0̄538	0̄645	0̄751
84	611 0857	0964	1070	1176	1283	1389	1495	1602	1708	1814
85	1921	2027	2133	2240	2346	2452	2558	2665	2771	2877
86	2984	3090	3196	3302	3409	3515	3621	3728	3834	3940
87	4046	4153	4259	4365	4471	4578	4684	4790	4896	5003
88	5109	5215	5321	5428	5534	5640	5746	5852	5959	6065
89	6171	6277	6384	6490	6596	6702	6808	6915	7021	7127
4090	611 7233	7339	7445	7552	7658	7764	7870	7976	8082	8189
91	8295	8401	8507	8613	8719	8826	8932	9038	9144	9250
92	9356	9462	9569	9675	9781	9887	9993	0̄099	0̄205	0̄311
93	612 0417	0524	0630	0736	0842	0948	1054	1160	1266	1372
94	1478	1584	1691	1797	1903	2009	2115	2221	2327	2433
95	2539	2645	2751	2857	2963	3069	3175	3281	3387	3493
96	3599	3706	3812	3918	4024	4130	4236	4342	4448	4554
97	4660	4766	4872	4978	5084	5190	5296	5402	5508	5614
98	5720	5826	5931	6037	6143	6249	6355	6461	6567	6673
99	6779	6885	6991	7097	7203	7309	7415	7521	7627	7733
4100	612 7839	7944	8050	8156	8262	8368	8474	8580	8686	8792
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	107
1	10.7
2	21.4
3	32.1
4	42.8
5	53.5
6	64.2
7	74.9
8	85.6
9	96.3

	106
1	10.6
2	21.2
3	31.8
4	42.4
5	53.0
6	63.6
7	74.2
8	84.8
9	95.4

	105
1	10.5
2	21.0
3	31.5
4	42.0
5	52.5
6	63.0
7	73.5
8	84.0
9	94.5

P. P.

40500″ = 11° 15′ 0″ 4050″ = 1° 7′ 30″ S. 4.685 5470 T. 6307
40600 = 11 16 40 4060 = 1 7 40 5468 6310
40700 = 11 18 20 4070 = 1 7 50 5467 6312
40800 = 11 20 0 4080 = 1 8 0 5465 6315
40900 = 11 21 40 4090 = 1 8 10 5464 6318

N.	0	1	2	3	4	5	6	7	8	9
4100	612 7839	7944	8050	8156	8262	8368	8474	8580	8686	8792
01	8898	9004	9109	9215	9321	9427	9533	9639	9745	9851
02	9957	0̄062	0̄168	0̄274	0̄380	0̄486	0̄592	0̄698	0̄803	0̄909
03	613 1015	1121	1227	1333	1439	1544	1650	1756	1862	1968
04	2074	2179	2285	2391	2497	2603	2708	2814	2920	3026
05	3132	3237	3343	3449	3555	3661	3766	3872	3978	4084
06	4189	4295	4401	4507	4613	4718	4824	4930	5036	5141
07	5247	5353	5459	5564	5670	5776	5881	5987	6093	6199
08	6304	6410	6516	6621	6727	6833	6939	7044	7150	7256
09	7361	7467	7573	7678	7784	7890	7996	8101	8207	8313
4110	613 8418	8524	8630	8735	8841	8947	9052	9158	9263	9369
11	9475	9580	9686	9792	9897	0̄003	0̄109	0̄214	0̄320	0̄425
12	614 0531	0637	0742	0848	0954	1059	1165	1270	1376	1482
13	1587	1693	1798	1904	2009	2115	2221	2326	2432	2537
14	2643	2748	2854	2960	3065	3171	3276	3382	3487	3593
15	3698	3804	3909	4015	4121	4226	4332	4437	4543	4648
16	4754	4859	4965	5070	5176	5281	5387	5492	5598	5703
17	5809	5914	6020	6125	6231	6336	6442	6547	6652	6758
18	6863	6969	7074	7180	7285	7391	7496	7602	7707	7812
19	7918	8023	8129	8234	8340	8445	8550	8656	8761	8867
4120	614 8972	9078	9183	9288	9394	9499	9605	9710	9815	9921
21	615 0026	0132	0237	0342	0448	0553	0658	0764	0869	0975
22	1080	1185	1291	1396	1501	1607	1712	1817	1923	2028
23	2133	2239	2344	2449	2555	2660	2765	2871	2976	3081
24	3187	3292	3397	3502	3608	3713	3818	3924	4029	4134
25	4240	4345	4450	4555	4661	4766	4871	4976	5082	5187
26	5292	5397	5503	5608	5713	5818	5924	6029	6134	6239
27	6345	6450	6555	6660	6766	6871	6976	7081	7186	7292
28	7397	7502	7607	7712	7818	7923	8028	8133	8238	8344
29	8449	8554	8659	8764	8870	8975	9080	9185	9290	9395
4130	615 9501	9606	9711	9816	9921	0̄026	0̄131	0̄237	0̄342	0̄447
31	616 0552	0657	0762	0867	0972	1078	1183	1288	1393	1498
32	1603	1708	1813	1918	2024	2129	2234	2339	2444	2549
33	2654	2759	2864	2969	3074	3179	3284	3390	3495	3600
34	3705	3810	3915	4020	4125	4230	4335	4440	4545	4650
35	4755	4860	4965	5070	5175	5280	5385	5490	5595	5700
36	5805	5910	6015	6120	6225	6330	6435	6540	6645	6750
37	6855	6960	7065	7170	7275	7380	7485	7590	7695	7800
38	7905	8010	8115	8220	8325	8430	8535	8639	8744	8849
39	8954	9059	9164	9269	9374	9479	9584	9689	9794	9899
4140	617 0003	0108	0213	0318	0423	0528	0633	0738	0843	0947
41	1052	1157	1262	1367	1472	1577	1682	1786	1891	1996
42	2101	2206	2311	2415	2520	2625	2730	2835	2940	3045
43	3149	3254	3359	3464	3569	3673	3778	3883	3988	4093
44	4197	4302	4407	4512	4617	4721	4826	4931	5036	5141
45	5245	5350	5455	5560	5664	5769	5874	5979	6083	6188
46	6293	6398	6502	6607	6712	6817	6921	7026	7131	7236
47	7340	7445	7550	7655	7759	7864	7969	8073	8178	8283
48	8387	8492	8597	8702	8806	8911	9016	9120	9225	9330
49	9434	9539	9644	9748	9853	9958	0̄062	0̄167	0̄272	0̄376
4150	618 0481	0586	0690	0795	0900	1004	1109	1213	1318	1423
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	106
1	10.6
2	21.2
3	31.8
4	42.4
5	53.0
6	63.6
7	74.2
8	84.8
9	95.4

	105
1	10.5
2	21.0
3	31.5
4	42.0
5	52.5
6	63.0
7	73.5
8	84.0
9	94.5

	104
1	10.4
2	20.8
3	31.2
4	41.6
5	52.0
6	62.4
7	72.8
8	83.2
9	93.6

P. P.

41000″ = 11° 23′ 20″　4100″ = 1° 8′ 20″　S. 4.685 5463　T. 6321
41100 = 11 25 0　4110 = 1 8 30　5461　6323
41200 = 11 26 40　4120 = 1 8 40　5460　6326
41300 = 11 28 20　4130 = 1 8 50　5458　6329
41400 = 11 30 0　4140 = 1 9 0　5457　6332

N.	0	1	2	3	4	5	6	7	8	9
4150	618 0481	0586	0690	0795	0900	1004	1109	1213	1318	1423
51	1527	1632	1737	1841	1946	2050	2155	2260	2364	2469
52	2573	2678	2783	2887	2992	3096	3201	3306	3410	3515
53	3619	3724	3828	3933	4038	4142	4247	4351	4456	4560
54	4665	4769	4874	4979	5083	5188	5292	5397	5501	5606
55	5710	5815	5919	6024	6128	6233	6337	6442	6546	6651
56	6755	6860	6964	7069	7173	7278	7382	7487	7591	7696
57	7800	7905	8009	8114	8218	8323	8427	8531	8636	8740
58	8845	8949	9054	9158	9263	9367	9471	9576	9680	9785
59	9889	9994	0̄098	0̄202	0̄307	0̄411	0̄516	0̄620	0̄725	0̄829
4160	619 0933	1038	1142	1246	1351	1455	1560	1664	1768	1873
61	1977	2082	2186	2290	2395	2499	2603	2708	2812	2916
62	3021	3125	3229	3334	3438	3542	3647	3751	3855	3960
63	4064	4168	4273	4377	4481	4586	4690	4794	4899	5003
64	5107	5212	5316	5420	5524	5629	5733	5837	5942	6046
65	6150	6254	6359	6463	6567	6671	6776	6880	6984	7088
66	7193	7297	7401	7505	7610	7714	7818	7922	8027	8131
67	8235	8339	8443	8548	8652	8756	8860	8964	9069	9173
68	9277	9381	9485	9590	9694	9798	9902	0̄006	0̄111	0̄215
69	620 0319	0423	0527	0631	0736	0840	0944	1048	1152	1256
4170	620 1361	1465	1569	1673	1777	1881	1985	2090	2194	2298
71	2402	2506	2610	2714	2818	2922	3027	3131	3235	3339
72	3443	3547	3651	3755	3859	3963	4068	4172	4276	4380
73	4484	4588	4692	4796	4900	5004	5108	5212	5316	5420
74	5524	5628	5733	5837	5941	6045	6149	6253	6357	6461
75	6565	6669	6773	6877	6981	7085	7189	7293	7397	7501
76	7605	7709	7813	7917	8021	8125	8229	8333	8437	8541
77	8645	8749	8853	8957	9061	9165	9269	9373	9476	9580
78	9684	9788	9892	9996	0̄100	0̄204	0̄308	0̄412	0̄516	0̄620
79	621 0724	0828	0932	1035	1139	1243	1347	1451	1555	1659
4180	621 1763	1867	1971	2075	2178	2282	2386	2490	2594	2698
81	2802	2906	3009	3113	3217	3321	3425	3529	3633	3736
82	3840	3944	4048	4152	4256	4359	4463	4567	4671	4775
83	4879	4982	5086	5190	5294	5398	5502	5605	5709	5813
84	5917	6021	6124	6228	6332	6436	6540	6643	6747	6851
85	6955	7058	7162	7266	7370	7473	7577	7681	7785	7888
86	7992	8096	8200	8303	8407	8511	8615	8718	8822	8926
87	9030	9133	9237	9341	9444	9548	9652	9756	9859	9963
88	622 0067	0170	0274	0378	0482	0585	0689	0793	0896	1000
89	1104	1207	1311	1415	1518	1622	1726	1829	1933	2037
4190	622 2140	2244	2348	2451	2555	2658	2762	2866	2969	3073
91	3177	3280	3384	3487	3591	3695	3798	3902	4006	4109
92	4213	4316	4420	4524	4627	4731	4834	4938	5041	5145
93	5249	5352	5456	5559	5663	5766	5870	5974	6077	6181
94	6284	6388	6491	6595	6698	6802	6906	7009	7113	7216
95	7320	7423	7527	7630	7734	7837	7941	8044	8148	8251
96	8355	8458	8562	8665	8769	8872	8976	9079	9183	9286
97	9390	9493	9597	9700	9804	9907	0̄011	0̄114	0̄217	0̄321
98	623 0424	0528	0631	0735	0838	0942	1045	1148	1252	1355
99	1459	1562	1666	1769	1872	1976	2079	2183	2286	2389
4200	623 2493	2596	2700	2803	2906	3010	3113	3217	3320	3423
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	105
1	10.5
2	21.0
3	31.5
4	42.0
5	52.5
6	63.0
7	73.5
8	84.0
9	94.5

	104
1	10.4
2	20.8
3	31.2
4	41.6
5	52.0
6	62.4
7	72.8
8	83.2
9	93.6

	103
1	10.3
2	20.6
3	30.9
4	41.2
5	51.5
6	61.8
7	72.1
8	82.4
9	92.7

P. P.

41500″ = 11° 31′ 40″ 4150″ = 1° 9′ 10″ S. 4.685 5456 T. 6335
41600 = 11 33 20 4160 = 1 9 20 5454 6338
41700 = 11 35 0 4170 = 1 9 30 5453 6340
41800 = 11 36 40 4180 = 1 9 40 5451 6343
41900 = 11 38 20 4190 = 1 9 50 5450 6346

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4200	623 2493	2596	2700	2803	2906	3010	3113	3217	3320	3423	
01	3527	3630	3734	3837	3940	4044	4147	4250	4354	4457	
02	4560	4664	4767	4871	4974	5077	5181	5284	5387	5491	
03	5594	5697	5801	5904	6007	6111	6214	6317	6420	6524	
04	6627	6730	6834	6937	7040	7144	7247	7350	7453	7557	
05	7660	7763	7867	7970	8073	8176	8280	8383	8486	8589	
06	8693	8796	8899	9002	9106	9209	9312	9415	9519	9622	104
07	9725	9828	9932	0̄035	0̄138	0̄241	0̄344	0̄448	0̄551	0̄654	1 10.4
08	624 0757	0861	0964	1067	1170	1273	1377	1480	1583	1686	2 20.8
09	1789	1892	1996	2099	2202	2305	2408	2511	2615	2718	3 31.2
4210	624 2821	2924	3027	3130	3234	3337	3440	3543	3646	3749	4 41.6 5 52.0
11	3852	3956	4059	4162	4265	4368	4471	4574	4677	4781	6 62.4
12	4884	4987	5090	5193	5296	5399	5502	5605	5708	5812	7 72.8
13	5915	6018	6121	6224	6327	6430	6533	6636	6739	6842	8 83.2
14	6945	7048	7151	7254	7358	7461	7564	7667	7770	7873	9 93.6
15	7976	8079	8182	8285	8388	8491	8594	8697	8800	8903	
16	9006	9109	9212	9315	9418	9521	9624	9727	9830	9933	
17	625 0036	0139	0242	0345	0448	0551	0654	0757	0860	0963	
18	1066	1169	1272	1375	1478	1581	1683	1786	1889	1992	
19	2095	2198	2301	2404	2507	2610	2713	2816	2919	3022	
4220	625 3125	3227	3330	3433	3536	3639	3742	3845	3948	4051	
21	4154	4256	4359	4462	4565	4668	4771	4874	4977	5079	103
22	5182	5285	5388	5491	5594	5697	5799	5902	6005	6108	1 10.3
23	6211	6314	6416	6519	6622	6725	6828	6931	7033	7136	2 20.6
24	7239	7342	7445	7548	7650	7753	7856	7959	8062	8164	3 30.9
25	8267	8370	8473	8575	8678	8781	8884	8987	9089	9192	4 41.2
26	9295	9398	9500	9603	9706	9809	9911	0̄014	0̄117	0̄220	5 51.5 6 61.8
27	626 0322	0425	0528	0631	0733	0836	0939	1042	1144	1247	7 72.1
28	1350	1453	1555	1658	1761	1863	1966	2069	2171	2274	8 82.4
29	2377	2480	2582	2685	2788	2890	2993	3096	3198	3301	9 92.7
4230	626 3404	3506	3609	3712	3814	3917	4020	4122	4225	4328	
31	4430	4533	4636	4738	4841	4943	5046	5149	5251	5354	
32	5457	5559	5662	5764	5867	5970	6072	6175	6277	6380	
33	6483	6585	6688	6790	6893	6996	7098	7201	7303	7406	
34	7509	7611	7714	7816	7919	8021	8124	8226	8329	8432	
35	8534	8637	8739	8842	8944	9047	9149	9252	9354	9457	
36	9560	9662	9765	9867	9970	0̄072	0̄175	0̄277	0̄380	0̄482	102
37	627 0585	0687	0790	0892	0995	1097	1200	1302	1405	1507	1 10.2
38	1610	1712	1814	1917	2019	2122	2224	2327	2429	2532	2 20.4
39	2634	2737	2839	2942	3044	3146	3249	3351	3454	3556	3 30.6
4240	627 3659	3761	3863	3966	4068	4171	4273	4376	4478	4580	4 40.8 5 51.0
41	4683	4785	4888	4990	5092	5195	5297	5399	5502	5604	6 61.2
42	5707	5809	5911	6014	6116	6219	6321	6423	6526	6628	7 71.4
43	6730	6833	6935	7037	7140	7242	7344	7447	7549	7651	8 81.6
44	7754	7856	7958	8061	8163	8265	8368	8470	8572	8675	9 91.8
45	8777	8879	8982	9084	9186	9288	9391	9493	9595	9698	
46	9800	9902	0̄004	0̄107	0̄209	0̄311	0̄414	0̄516	0̄618	0̄720	
47	628 0823	0925	1027	1129	1232	1334	1436	1538	1641	1743	
48	1845	1947	2050	2152	2254	2356	2458	2561	2663	2765	
49	2867	2970	3072	3174	3276	3378	3481	3583	3685	3787	
4250	628 3889	3991	4094	4196	4298	4400	4502	4605	4707	4809	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

42000″ = 11°40′ 0″	4200″ = 1°10′ 0″	S. 4.685 5449	T. 6349
42100 = 11 41 40	4210 = 1 10 10	5447	6352
42200 = 11 43 20	4220 = 1 10 20	5446	6355
42300 = 11 45 0	4230 = 1 10 30	5444	6358
42400 = 11 46 40	4240 = 1 10 40	5443	6360

N.	0	1	2	3	4	5	6	7	8	9
4250	628 3889	3991	4094	4196	4298	4400	4502	4605	4707	4809
51	4911	5013	5115	5218	5320	5422	5524	5626	5728	5830
52	5933	6035	6137	6239	6341	6443	6545	6647	6750	6852
53	6954	7056	7158	7260	7362	7464	7566	7669	7771	7873
54	7975	8077	8179	8281	8383	8485	8587	8689	8792	8894
55	8996	9098	9200	9302	9404	9506	9608	9710	9812	9914
56	629 0016	0118	0220	0322	0424	0526	0628	0730	0832	0934
57	1037	1139	1241	1343	1445	1547	1649	1751	1853	1955
58	2057	2159	2261	2363	2465	2567	2668	2770	2872	2974
59	3076	3178	3280	3382	3484	3586	3688	3790	3892	3994
4260	629 4096	4198	4300	4402	4504	4606	4708	4810	4911	5013
61	5115	5217	5319	5421	5523	5625	5727	5829	5931	6033
62	6134	6236	6338	6440	6542	6644	6746	6848	6950	7051
63	7153	7255	7357	7459	7561	7663	7765	7866	7968	8070
64	8172	8274	8376	8478	8579	8681	8783	8885	8987	9089
65	9190	9292	9394	9496	9598	9699	9801	9903	0̄005	0̄107
66	630 0209	0310	0412	0514	0616	0717	0819	0921	1023	1125
67	1226	1328	1430	1532	1634	1735	1837	1939	2041	2142
68	2244	2346	2448	2549	2651	2753	2855	2956	3058	3160
69	3262	3363	3465	3567	3668	3770	3872	3974	4075	4177
4270	630 4279	4380	4482	4584	4686	4787	4889	4991	5092	5194
71	5296	5397	5499	5601	5702	5804	5906	6007	6109	6211
72	6312	6414	6516	6617	6719	6821	6922	7024	7126	7227
73	7329	7431	7532	7634	7735	7837	7939	8040	8142	8244
74	8345	8447	8548	8650	8752	8853	8955	9056	9158	9260
75	9361	9463	9564	9666	9768	9869	9971	0̄072	0̄174	0̄275
76	631 0377	0479	0580	0682	0783	0885	0986	1088	1189	1291
77	1393	1494	1596	1697	1799	1900	2002	2103	2205	2306
78	2408	2509	2611	2712	2814	2915	3017	3118	3220	3321
79	3423	3524	3626	3727	3829	3930	4032	4133	4235	4336
4280	631 4438	4539	4641	4742	4844	4945	5046	5148	5249	5351
81	5452	5554	5655	5757	5858	5959	6061	6162	6264	6365
82	6467	6568	6669	6771	6872	6974	7075	7177	7278	7379
83	7481	7582	7684	7785	7886	7988	8089	8190	8292	8393
84	8495	8596	8697	8799	8900	9001	9103	9204	9306	9407
85	9508	9610	9711	9812	9914	0̄015	0̄116	0̄218	0̄319	0̄420
86	632 0522	0623	0724	0826	0927	1028	1130	1231	1332	1434
87	1535	1636	1737	1839	1940	2041	2143	2244	2345	2446
88	2548	2649	2750	2852	2953	3054	3155	3257	3358	3459
89	3560	3662	3763	3864	3965	4067	4168	4269	4370	4472
4290	632 4573	4674	4775	4877	4978	5079	5180	5282	5383	5484
91	5585	5686	5788	5889	5990	6091	6192	6294	6395	6496
92	6597	6698	6800	6901	7002	7103	7204	7305	7407	7508
93	7609	7710	7811	7912	8014	8115	8216	8317	8418	8519
94	8620	8722	8823	8924	9025	9126	9227	9328	9429	9531
95	9632	9733	9834	9935	0̄036	0̄137	0̄238	0̄339	0̄441	0̄542
96	633 0643	0744	0845	0946	1047	1148	1249	1350	1451	1552
97	1654	1755	1856	1957	2058	2159	2260	2361	2462	2563
98	2664	2765	2866	2967	3068	3169	3270	3371	3472	3573
99	3674	3775	3876	3978	4079	4180	4281	4382	4483	4584
4300	633 4685	4786	4887	4988	5089	5190	5291	5391	5492	5593
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	103
1	10.3
2	20.6
3	30.9
4	41.2
5	51.5
6	61.8
7	72.1
8	82.4
9	92.7

	102
1	10.2
2	20.4
3	30.6
4	40.8
5	51.0
6	61.2
7	71.4
8	81.6
9	91.8

	101
1	10.1
2	20.2
3	30.3
4	40.4
5	50.5
6	60.6
7	70.7
8	80.8
9	90.9

P. P.

42500″ = 11° 48′ 20″	4250″ = 1° 10′ 50″	S. 4.685 5441	T. 6363
42600 = 11 50 0	4260 = 1 11 0	5440	6366
42700 = 11 51 40	4270 = 1 11 10	5438	6369
42800 = 11 53 20	4280 = 1 11 20	5437	6372
42900 = 11 55 0	4290 = 1 11 30	5436	6375

N.	0	1	2	3	4	5	6	7	8	9
4300	633 4685	4786	4887	4988	5089	5190	5291	5391	5492	5593
01	5694	5795	5896	5997	6098	6199	6300	6401	6502	6603
02	6704	6805	6906	7007	7108	7209	7310	7411	7512	7613
03	7713	7814	7915	8016	8117	8218	8319	8420	8521	8622
04	8723	8824	8924	9025	9126	9227	9328	9429	9530	9631
05	9732	9832	9933	0̄034	0̄135	0̄236	0̄337	0̄438	0̄539	0̄639
06	634 0740	0841	0942	1043	1144	1245	1345	1446	1547	1648
07	1749	1850	1950	2051	2152	2253	2354	2455	2555	2656
08	2757	2858	2959	3059	3160	3261	3362	3463	3563	3664
09	3765	3866	3967	4067	4168	4269	4370	4470	4571	4672
4310	634 4773	4873	4974	5075	5176	5276	5377	5478	5579	5679
11	5780	5881	5982	6082	6183	6284	6385	6485	6586	6687
12	6788	6888	6989	7090	7190	7291	7392	7492	7593	7694
13	7795	7895	7996	8097	8197	8298	8399	8499	8600	8701
14	8801	8902	9003	9103	9204	9305	9405	9506	9607	9707
15	9808	9909	0̄009	0̄110	0̄211	0̄311	0̄412	0̄512	0̄613	0̄714
16	635 0814	0915	1016	1116	1217	1317	1418	1519	1619	1720
17	1820	1921	2022	2122	2223	2323	2424	2525	2625	2726
18	2826	2927	3028	3128	3229	3329	3430	3530	3631	3731
19	3832	3933	4033	4134	4234	4335	4435	4536	4636	4737
4320	635 4837	4938	5039	5139	5240	5340	5441	5541	5642	5742
21	5843	5943	6044	6144	6245	6345	6446	6546	6647	6747
22	6848	6948	7049	7149	7250	7350	7450	7551	7651	7752
23	7852	7953	8053	8154	8254	8355	8455	8556	8656	8756
24	8857	8957	9058	9158	9259	9359	9459	9560	9660	9761
25	9861	9962	0̄062	0̄162	0̄263	0̄363	0̄464	0̄564	0̄664	0̄765
26	636 0865	0966	1066	1166	1267	1367	1467	1568	1668	1769
27	1869	1969	2070	2170	2270	2371	2471	2571	2672	2772
28	2873	2973	3073	3174	3274	3374	3475	3575	3675	3776
29	3876	3976	4076	4177	4277	4377	4478	4578	4678	4779
4330	636 4879	4979	5080	5180	5280	5380	5481	5581	5681	5782
31	5882	5982	6082	6183	6283	6383	6483	6584	6684	6784
32	6884	6985	7085	7185	7285	7386	7486	7586	7686	7787
33	7887	7987	8087	8188	8288	8388	8488	8588	8689	8789
34	8889	8989	9089	9190	9290	9390	9490	9590	9691	9791
35	9891	9991	0̄091	0̄192	0̄292	0̄392	0̄492	0̄592	0̄692	0̄793
36	637 0893	0993	1093	1193	1293	1394	1494	1594	1694	1794
37	1894	1994	2094	2195	2295	2395	2495	2595	2695	2795
38	2895	2996	3096	3196	3296	3396	3496	3596	3696	3796
39	3897	3997	4097	4197	4297	4397	4497	4597	4697	4797
4340	637 4897	4997	5097	5197	5298	5398	5498	5598	5698	5798
41	5898	5998	6098	6198	6298	6398	6498	6598	6698	6798
42	6898	6998	7098	7198	7298	7398	7498	7598	7698	7798
43	7898	7998	8098	8198	8298	8398	8498	8598	8698	8798
44	8898	8998	9098	9198	9298	9398	9498	9598	9698	9798
45	9898	9998	0̄098	0̄198	0̄298	0̄398	0̄497	0̄597	0̄697	0̄797
46	638 0897	0997	1097	1197	1297	1397	1497	1597	1697	1796
47	1896	1996	2096	2196	2296	2396	2496	2596	2696	2795
48	2895	2995	3095	3195	3295	3395	3495	3594	3694	3794
49	3894	3994	4094	4194	4294	4393	4493	4593	4693	4793
4350	638 4893	4992	5092	5192	5292	5392	5492	5591	5691	5791
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	101
1	10.1
2	20.2
3	30.3
4	40.4
5	50.5
6	60.6
7	70.7
8	80.8
9	90.9

	100
1	10.0
2	20.0
3	30.0
4	40.0
5	50.0
6	60.0
7	70.0
8	80.0
9	90.0

	99
1	9.9
2	19.8
3	29.7
4	39.6
5	49.5
6	59.4
7	69.3
8	79.2
9	89.1

P. P.

43000″ = 11° 56′ 40″	4300″ = 1° 11′ 40″	S. 4.685 5434	T. 6378
43100 = 11 58 20	4310 = 1 11 50	5433	6381
43200 = 12 0 0	4320 = 1 12 0	5431	6384
43300 = 12 1 40	4330 = 1 12 10	5430	6387
43400 = 12 3 20	4340 = 1 12 20	5428	6390

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4350	638 4893	4992	5092	5192	5292	5392	5492	5591	5691	5791	
51	5891	5991	6090	6190	6290	6390	6490	6589	6689	6789	
52	6889	6989	7088	7188	7288	7388	7488	7587	7687	7787	
53	7887	7986	8086	8186	8286	8385	8485	8585	8685	8784	
54	8884	8984	9084	9183	9283	9383	9483	9582	9682	9782	
55	9882	9981	0̄081	0̄181	0̄280	0̄380	0̄480	0̄580	0̄679	0̄779	
56	639 0879	0978	1078	1178	1277	1377	1477	1577	1676	1776	100
57	1876	1975	2075	2175	2274	2374	2474	2573	2673	2773	1 10.0
58	2872	2972	3072	3171	3271	3371	3470	3570	3669	3769	2 20.0
59	3869	3968	4068	4168	4267	4367	4466	4566	4666	4765	3 30.0
4360	639 4865	4965	5064	5164	5263	5363	5463	5562	5662	5761	4 40.0 5 50.0
61	5861	5960	6060	6160	6259	6359	6458	6558	6657	6757	6 60.0
62	6857	6956	7056	7155	7255	7354	7454	7553	7653	7753	7 70.0
63	7852	7952	8051	8151	8250	8350	8449	8549	8648	8748	8 80.0
64	8847	8947	9046	9146	9245	9345	9444	9544	9643	9743	9 90.0
65	9842	9942	0̄041	0̄141	0̄240	0̄340	0̄439	0̄539	0̄638	0̄738	
66	640 0837	0937	1036	1136	1235	1335	1434	1534	1633	1732	
67	1832	1931	2031	2130	2230	2329	2429	2528	2627	2727	
68	2826	2926	3025	3125	3224	3323	3423	3522	3622	3721	
69	3820	3920	4019	4119	4218	4317	4417	4516	4616	4715	
4370	640 4814	4914	5013	5113	5212	5311	5411	5510	5609	5709	
71	5808	5907	6007	6106	6205	6305	6404	6504	6603	6702	99
72	6802	6901	7000	7100	7199	7298	7398	7497	7596	7695	1 9.9
73	7795	7894	7993	8093	8192	8291	8391	8490	8589	8688	2 19.8
74	8788	8887	8986	9086	9185	9284	9383	9483	9582	9681	3 29.7
75	9781	9880	9979	0̄078	0̄178	0̄277	0̄376	0̄475	0̄575	0̄674	4 39.6
76	641 0773	0872	0972	1071	1170	1269	1369	1468	1567	1666	5 49.5 6 59.4
77	1765	1865	1964	2063	2162	2262	2361	2460	2559	2658	7 69.3
78	2758	2857	2956	3055	3154	3254	3353	3452	3551	3650	8 79.2
79	3749	3849	3948	4047	4146	4245	4344	4444	4543	4642	9 89.1
4380	641 4741	4840	4939	5039	5138	5237	5336	5435	5534	5633	
81	5733	5832	5931	6030	6129	6228	6327	6426	6526	6625	
82	6724	6823	6922	7021	7120	7219	7318	7417	7517	7616	
83	7715	7814	7913	8012	8111	8210	8309	8408	8507	8606	
84	8705	8805	8904	9003	9102	9201	9300	9399	9498	9597	
85	9696	9795	9894	9993	0̄092	0̄191	0̄290	0̄389	0̄488	0̄587	
86	642 0686	0785	0884	0983	1082	1181	1280	1379	1478	1577	98
87	1676	1775	1874	1973	2072	2171	2270	2369	2468	2567	1 9.8
88	2666	2765	2864	2963	3062	3161	3260	3359	3458	3557	2 19.6
89	3656	3755	3854	3953	4052	4151	4249	4348	4447	4546	3 29.4
4390	642 4645	4744	4843	4942	5041	5140	5239	5338	5437	5535	4 39.2 5 49.0
91	5634	5733	5832	5931	6030	6129	6228	6327	6426	6524	6 58.8
92	6623	6722	6821	6920	7019	7118	7217	7315	7414	7513	7 68.6
93	7612	7711	7810	7909	8007	8106	8205	8304	8403	8502	8 78.4
94	8601	8699	8798	8897	8996	9095	9194	9292	9391	9490	9 88.2
95	9589	9688	9786	9885	9984	0̄083	0̄182	0̄280	0̄379	0̄478	
96	643 0577	0676	0774	0873	0972	1071	1170	1268	1367	1466	
97	1565	1663	1762	1861	1960	2058	2157	2256	2355	2454	
98	2552	2651	2750	2848	2947	3046	3145	3243	3342	3441	
99	3540	3638	3737	3836	3935	4033	4132	4231	4329	4428	
4400	643 4527	4625	4724	4823	4922	5020	5119	5218	5316	5415	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

43500″ = 12° 5′ 0″	4350″ = 1° 12′ 30″	S. 4.685 5427	T. 6393
43600 = 12 6 40	4360 = 1 12 40	5425	6396
43700 = 12 8 20	4370 = 1 12 50	5424	6399
43800 = 12 10 0	4380 = 1 13 0	5422	6402
43900 = 12 11 40	4390 = 1 13 10	5421	6404

N.	0	1	2	3	4	5	6	7	8	9
4400	643 4527	4625	4724	4823	4922	5020	5119	5218	5316	5415
01	5514	5612	5711	5810	5908	6007	6106	6204	6303	6402
02	6500	6599	6698	6796	6895	6994	7092	7191	7290	7388
03	7487	7585	7684	7783	7881	7980	8079	8177	8276	8374
04	8473	8572	8670	8769	8868	8966	9065	9163	9262	9361
05	9459	9558	9656	9755	9853	9952	0̄051	0̄149	0̄248	0̄346
06	644 0445	0543	0642	0741	0839	0938	1036	1135	1233	1332
07	1431	1529	1628	1726	1825	1923	2022	2120	2219	2317
08	2416	2514	2613	2711	2810	2908	3007	3105	3204	3302
09	3401	3499	3598	3696	3795	3893	3992	4090	4189	4287
4410	644 4386	4484	4583	4681	4780	4878	4977	5075	5174	5272
11	5371	5469	5567	5666	5764	5863	5961	6060	6158	6257
12	6355	6453	6552	6650	6749	6847	6946	7044	7142	7241
13	7339	7438	7536	7635	7733	7831	7930	8028	8127	8225
14	8323	8422	8520	8618	8717	8815	8914	9012	9110	9209
15	9307	9405	9504	9602	9701	9799	9897	9996	0̄094	0̄192
16	645 0291	0389	0487	0586	0684	0782	0881	0979	1077	1176
17	1274	1372	1471	1569	1667	1766	1864	1962	2061	2159
18	2257	2355	2454	2552	2650	2749	2847	2945	3043	3142
19	3240	3338	3437	3535	3633	3731	3830	3928	4026	4124
4420	645 4223	4321	4419	4517	4616	4714	4812	4910	5009	5107
21	5205	5303	5402	5500	5598	5696	5795	5893	5991	6089
22	6187	6286	6384	6482	6580	6678	6777	6875	6973	7071
23	7169	7268	7366	7464	7562	7660	7758	7857	7955	8053
24	8151	8249	8348	8446	8544	8642	8740	8838	8936	9035
25	9133	9231	9329	9427	9525	9623	9722	9820	9918	0̄016
26	646 0114	0212	0310	0408	0507	0605	0703	0801	0899	0997
27	1095	1193	1291	1390	1488	1586	1684	1782	1880	1978
28	2076	2174	2272	2370	2468	2566	2665	2763	2861	2959
29	3057	3155	3253	3351	3449	3547	3645	3743	3841	3939
4430	646 4037	4135	4233	4331	4429	4527	4625	4723	4821	4919
31	5018	5116	5214	5312	5410	5508	5606	5704	5802	5900
32	5998	6096	6193	6291	6389	6487	6585	6683	6781	6879
33	6977	7075	7173	7271	7369	7467	7565	7663	7761	7859
34	7957	8055	8153	8251	8349	8447	8545	8642	8740	8838
35	8936	9034	9132	9230	9328	9426	9524	9622	9720	9817
36	9915	0̄013	0̄111	0̄209	0̄307	0̄405	0̄503	0̄601	0̄699	0̄796
37	647 0894	0992	1090	1188	1286	1384	1482	1579	1677	1775
38	1873	1971	2069	2167	2264	2362	2460	2558	2656	2754
39	2851	2949	3047	3145	3243	3341	3438	3536	3634	3732
4440	647 3830	3928	4025	4123	4221	4319	4417	4514	4612	4710
41	4808	4906	5003	5101	5199	5297	5394	5492	5590	5688
42	5786	5883	5981	6079	6177	6274	6372	6470	6568	6665
43	6763	6861	6959	7056	7154	7252	7350	7447	7545	7643
44	7741	7838	7936	8034	8131	8229	8327	8425	8522	8620
45	8718	8815	8913	9011	9108	9206	9304	9402	9499	9597
46	9695	9792	9890	9988	0̄085	0̄183	0̄281	0̄378	0̄476	0̄574
47	648 0671	0769	0867	0964	1062	1160	1257	1355	1453	1550
48	1648	1745	1843	1941	2038	2136	2234	2331	2429	2526
49	2624	2722	2819	2917	3015	3112	3210	3307	3405	3503
4450	648 3600	3698	3795	3893	3990	4088	4186	4283	4381	4478
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	99
1	9.9
2	19.8
3	29.7
4	39.6
5	49.5
6	59.4
7	69.3
8	79.2
9	89.1

	98
1	9.8
2	19.6
3	29.4
4	39.2
5	49.0
6	58.8
7	68.6
8	78.4
9	88.2

	97
1	9.7
2	19.4
3	29.1
4	38.8
5	48.5
6	58.2
7	67.9
8	77.6
9	87.3

P. P.

44000″ = 12° 13′ 20″ 4400″ = 1° 13′ 20″ S. 4.685 5419 T. 6407
44100 = 12 15 0 4410 = 1 13 30 5418 6410
44200 = 12 16 40 4420 = 1 13 40 5416 6413
44300 = 12 18 20 4430 = 1 13 50 5415 6416
44400 = 12 20 0 4440 = 1 14 0 5413 6420

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4450	648 3600	3698	3795	3893	3990	4088	4186	4283	4381	4478	
51	4576	4674	4771	4869	4966	5064	5161	5259	5356	5454	
52	5552	5649	5747	5844	5942	6039	6137	6234	6332	6429	
53	6527	6624	6722	6820	6917	7015	7112	7210	7307	7405	
54	7502	7600	7697	7795	7892	7990	8087	8185	8282	8380	
55	8477	8575	8672	8770	8867	8964	9062	9159	9257	9354	
56	9452	9549	9647	9744	9842	9939	0̄037	0̄134	0̄231	0̄329	98 1 9.8 2 19.6 3 29.4 4 39.2 5 49.0 6 58.8 7 68.6 8 78.4 9 88.2
57	649 0426	0524	0621	0719	0816	0914	1011	1108	1206	1303	
58	1401	1498	1595	1693	1790	1888	1985	2083	2180	2277	
59	2375	2472	2570	2667	2764	2862	2959	3056	3154	3251	
4460	649 3349	3446	3543	3641	3738	3835	3933	4030	4128	4225	
61	4322	4420	4517	4614	4712	4809	4906	5004	5101	5198	
62	5296	5393	5490	5588	5685	5782	5880	5977	6074	6172	
63	6269	6366	6463	6561	6658	6755	6853	6950	7047	7145	
64	7242	7339	7436	7534	7631	7728	7826	7923	8020	8117	
65	8215	8312	8409	8506	8604	8701	8798	8895	8993	9090	
66	9187	9284	9382	9479	9576	9673	9771	9868	9965	0̄062	
67	650 0160	0257	0354	0451	0548	0646	0743	0840	0937	1034	
68	1132	1229	1326	1423	1520	1618	1715	1812	1909	2006	
69	2104	2201	2298	2395	2492	2589	2687	2784	2881	2978	
4470	650 3075	3172	3270	3367	3464	3561	3658	3755	3852	3950	
71	4047	4144	4241	4338	4435	4532	4629	4727	4824	4921	97 1 9.7 2 19.4 3 29.1 4 38.8 5 48.5 6 58.2 7 67.9 8 77.6 9 87.3
72	5018	5115	5212	5309	5406	5503	5601	5698	5795	5892	
73	5989	6086	6183	6280	6377	6474	6571	6669	6766	6863	
74	6960	7057	7154	7251	7348	7445	7542	7639	7736	7833	
75	7930	8027	8124	8222	8319	8416	8513	8610	8707	8804	
76	8901	8998	9095	9192	9289	9386	9483	9580	9677	9774	
77	9871	9968	0̄065	0̄162	0̄259	0̄356	0̄453	0̄550	0̄647	0̄744	
78	651 0841	0938	1035	1132	1229	1326	1423	1520	1617	1714	
79	1811	1908	2005	2102	2198	2295	2392	2489	2586	2683	
4480	651 2780	2877	2974	3071	3168	3265	3362	3459	3556	3653	
81	3749	3846	3943	4040	4137	4234	4331	4428	4525	4622	
82	4719	4815	4912	5009	5106	5203	5300	5397	5494	5591	
83	5687	5784	5881	5978	6075	6172	6269	6365	6462	6559	
84	6656	6753	6850	6947	7043	7140	7237	7334	7431	7528	
85	7624	7721	7818	7915	8012	8109	8205	8302	8399	8496	
86	8593	8690	8786	8883	8980	9077	9174	9270	9367	9464	
87	9561	9657	9754	9851	9948	0̄045	0̄141	0̄238	0̄335	0̄432	96 1 9.6 2 19.2 3 28.8 4 38.4 5 48.0 6 57.6 7 67.2 8 76.8 9 86.4
88	652 0528	0625	0722	0819	0916	1012	1109	1206	1303	1399	
89	1496	1593	1690	1786	1883	1980	2076	2173	2270	2367	
4490	652 2463	2560	2657	2754	2850	2947	3044	3140	3237	3334	
91	3431	3527	3624	3721	3817	3914	4011	4107	4204	4301	
92	4397	4494	4591	4688	4784	4881	4978	5074	5171	5268	
93	5364	5461	5558	5654	5751	5847	5944	6041	6137	6234	
94	6331	6427	6524	6621	6717	6814	6910	7007	7104	7200	
95	7297	7394	7490	7587	7683	7780	7877	7973	8070	8166	
96	8263	8360	8456	8553	8649	8746	8843	8939	9036	9132	
97	9229	9325	9422	9519	9615	9712	9808	9905	0̄001	0̄098	
98	653 0195	0291	0388	0484	0581	0677	0774	0870	0967	1063	
99	1160	1256	1353	1450	1546	1643	1739	1836	1932	2029	
4500	653 2125	2222	2318	2415	2511	2608	2704	2801	2897	2994	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

44500″ = 12° 21′ 40″ 4450″ = 1° 14′ 10″ S. 4.685 5412 T. 6423
44600 = 12 23 20 4460 = 1 14 20 5410 6426
44700 = 12 25 0 4470 = 1 14 30 5409 6429
44800 = 12 26 40 4480 = 1 14 40 5407 6432
44900 = 12 28 20 4490 = 1 14 50 5406 6435

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4500	653 2125	2222	2318	2415	2511	2608	2704	2801	2897	2994	
01	3090	3187	3283	3380	3476	3573	3669	3765	3862	3958	
02	4055	4151	4248	4344	4441	4537	4634	4730	4827	4923	
03	5019	5116	5212	5309	5405	5502	5598	5695	5791	5887	
04	5984	6080	6177	6273	6369	6466	6562	6659	6755	6852	
05	6948	7044	7141	7237	7334	7430	7526	7623	7719	7815	
06	7912	8008	8105	8201	8297	8394	8490	8586	8683	8779	97
07	8876	8972	9068	9165	9261	9357	9454	9550	9646	9743	1 9.7 2 19.4 3 29.1 4 38.8 5 48.5 6 58.2 7 67.9 8 77.6 9 87.3
08	9839	9935	0̄032	0̄128	0̄224	0̄321	0̄417	0̄513	0̄610	0̄706	
09	654 0802	0899	0995	1091	1188	1284	1380	1477	1573	1669	
4510	654 1765	1862	1958	2054	2151	2247	2343	2439	2536	2632	
11	2728	2825	2921	3017	3113	3210	3306	3402	3498	3595	
12	3691	3787	3883	3980	4076	4172	4268	4365	4461	4557	
13	4653	4750	4846	4942	5038	5134	5231	5327	5423	5519	
14	5616	5712	5808	5904	6000	6097	6193	6289	6385	6481	
15	6578	6674	6770	6866	6962	7058	7155	7251	7347	7443	
16	7539	7635	7732	7828	7924	8020	8116	8212	8309	8405	
17	8501	8597	8693	8789	8885	8982	9078	9174	9270	9366	
18	9462	9558	9655	9751	9847	9943	0̄039	0̄135	0̄231	0̄327	
19	655 0423	0520	0616	0712	0808	0904	1000	1096	1192	1288	
4520	655 1384	1480	1577	1673	1769	1865	1961	2057	2153	2249	
21	2345	2441	2537	2633	2729	2825	2921	3017	3113	3210	96
22	3306	3402	3498	3594	3690	3786	3882	3978	4074	4170	1 9.6 2 19.2 3 28.8 4 38.4 5 48.0 6 57.6 7 67.2 8 76.8 9 86.4
23	4266	4362	4458	4554	4650	4746	4842	4938	5034	5130	
24	5226	5322	5418	5514	5610	5706	5802	5898	5994	6090	
25	6186	6282	6378	6474	6570	6666	6762	6858	6954	7050	
26	7145	7241	7337	7433	7529	7625	7721	7817	7913	8009	
27	8105	8201	8297	8393	8489	8585	8681	8776	8872	8968	
28	9064	9160	9256	9352	9448	9544	9640	9736	9831	9927	
29	656 0023	0119	0215	0311	0407	0503	0599	0694	0790	0886	
4530	656 0982	1078	1174	1270	1365	1461	1557	1653	1749	1845	
31	1941	2036	2132	2228	2324	2420	2516	2612	2707	2803	
32	2899	2995	3091	3186	3282	3378	3474	3570	3666	3761	
33	3857	3953	4049	4145	4240	4336	4432	4528	4624	4719	
34	4815	4911	5007	5103	5198	5294	5390	5486	5581	5677	
35	5773	5869	5964	6060	6156	6252	6347	6443	6539	6635	
36	6730	6826	6922	7018	7113	7209	7305	7401	7496	7592	95
37	7688	7784	7879	7975	8071	8166	8262	8358	8454	8549	1 9.5 2 19.0 3 28.5 4 38.0 5 47.5 6 57.0 7 66.5 8 76.0 9 85.5
38	8645	8741	8836	8932	9028	9123	9219	9315	9410	9506	
39	9602	9698	9793	9889	9985	0̄080	0̄176	0̄272	0̄367	0̄463	
4540	657 0559	0654	0750	0845	0941	1037	1132	1228	1324	1419	
41	1515	1611	1706	1802	1898	1993	2089	2184	2280	2376	
42	2471	2567	2663	2758	2854	2949	3045	3141	3236	3332	
43	3427	3523	3619	3714	3810	3905	4001	4096	4192	4288	
44	4383	4479	4574	4670	4766	4861	4957	5052	5148	5243	
45	5339	5434	5530	5626	5721	5817	5912	6008	6103	6199	
46	6294	6390	6485	6581	6676	6772	6867	6963	7059	7154	
47	7250	7345	7441	7536	7632	7727	7823	7918	8014	8109	
48	8205	8300	8396	8491	8587	8682	8777	8873	8968	9064	
49	9159	9255	9350	9446	9541	9637	9732	9828	9923	0̄019	
4550	658 0114	0209	0305	0400	0496	0591	0687	0782	0877	0973	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

		S.	T.
45000″ = 12° 30′ 0″	4500″ = 1° 15′ 0″	4.685 5404	6438
45100 = 12 31 40	4510 = 1 15 10	5403	6441
45200 = 12 33 20	4520 = 1 15 20	5401	6444
45300 = 12 35 0	4530 = 1 15 30	5400	6447
45400 = 12 36 40	4540 = 1 15 40	5398	6450

N.	0	1	2	3	4	5	6	7	8	9
4550	658 0114	0209	0305	0400	0496	0591	0687	0782	0877	0973
51	1068	1164	1259	1355	1450	1545	1641	1736	1832	1927
52	2023	2118	2213	2309	2404	2500	2595	2690	2786	2881
53	2977	3072	3167	3263	3358	3453	3549	3644	3740	3835
54	3930	4026	4121	4216	4312	4407	4502	4598	4693	4788
55	4884	4979	5074	5170	5265	5361	5456	5551	5647	5742
56	5837	5932	6028	6123	6218	6314	6409	6504	6600	6695
57	6790	6886	6981	7076	7171	7267	7362	7457	7553	7648
58	7743	7838	7934	8029	8124	8220	8315	8410	8505	8601
59	8696	8791	8886	8982	9077	9172	9267	9363	9458	9553
4560	658 9648	9744	9839	9934	$\bar{0}029$	$\bar{0}125$	$\bar{0}220$	$\bar{0}315$	$\bar{0}410$	$\bar{0}506$
61	659 0601	0696	0791	0886	0982	1077	1172	1267	1362	1458
62	1553	1648	1743	1838	1934	2029	2124	2219	2314	2410
63	2505	2600	2695	2790	2885	2981	3076	3171	3266	3361
64	3456	3552	3647	3742	3837	3932	4027	4122	4218	4313
65	4408	4503	4598	4693	4788	4883	4979	5074	5169	5264
66	5359	5454	5549	5644	5740	5835	5930	6025	6120	6215
67	6310	6405	6500	6595	6690	6786	6881	6976	7071	7166
68	7261	7356	7451	7546	7641	7736	7831	7926	8021	8117
69	8212	8307	8402	8497	8592	8687	8782	8877	8972	9067
4570	659 9162	9257	9352	9447	9542	9637	9732	9827	9922	$\bar{0}017$
71	660 0112	0207	0302	0397	0492	0587	0682	0777	0872	0967
72	1062	1157	1252	1347	1442	1537	1632	1727	1822	1917
73	2012	2107	2202	2297	2392	2487	2582	2677	2772	2867
74	2962	3057	3151	3246	3341	3436	3531	3626	3721	3816
75	3911	4006	4101	4196	4291	4386	4481	4575	4670	4765
76	4860	4955	5050	5145	5240	5335	5430	5524	5619	5714
77	5809	5904	5999	6094	6189	6284	6378	6473	6568	6663
78	6758	6853	6948	7042	7137	7232	7327	7422	7517	7612
79	7706	7801	7896	7991	8086	8181	8275	8370	8465	8560
4580	660 8655	8750	8844	8939	9034	9129	9224	9318	9413	9508
81	9603	9698	9793	9887	9982	$\bar{0}077$	$\bar{0}172$	$\bar{0}266$	$\bar{0}361$	$\bar{0}456$
82	661 0551	0646	0740	0835	0930	1025	1120	1214	1309	1404
83	1499	1593	1688	1783	1878	1972	2067	2162	2257	2351
84	2446	2541	2636	2730	2825	2920	3015	3109	3204	3299
85	3393	3488	3583	3678	3772	3867	3962	4056	4151	4246
86	4341	4435	4530	4625	4719	4814	4909	5003	5098	5193
87	5287	5382	5477	5571	5666	5761	5855	5950	6045	6139
88	6234	6329	6423	6518	6613	6707	6802	6897	6991	7086
89	7181	7275	7370	7464	7559	7654	7748	7843	7938	8032
4590	661 8127	8221	8316	8411	8505	8600	8695	8789	8884	8978
91	9073	9168	9262	9357	9451	9546	9640	9735	9830	9924
92	662 0019	0113	0208	0303	0397	0492	0586	0681	0775	0870
93	0964	1059	1154	1248	1343	1437	1532	1626	1721	1815
94	1910	2004	2099	2194	2288	2383	2477	2572	2666	2761
95	2855	2950	3044	3139	3233	3328	3422	3517	3611	3706
96	3800	3895	3989	4084	4178	4273	4367	4462	4556	4651
97	4745	4840	4934	5028	5123	5217	5312	5406	5501	5595
98	5690	5784	5879	5973	6067	6162	6256	6351	6445	6540
99	6634	6729	6823	6917	7012	7106	7201	7295	7389	7484
4600	662 7578	7673	7767	7862	7956	8050	8145	8239	8334	8428
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	96
1	9.6
2	19.2
3	28.8
4	38.4
5	48.0
6	57.6
7	67.2
8	76.8
9	86.4

	95
1	9.5
2	19.0
3	28.5
4	38.0
5	47.5
6	57.0
7	66.5
8	76.0
9	85.5

	94
1	9.4
2	18.8
3	28.2
4	37.6
5	47.0
6	56.4
7	65.8
8	75.2
9	84.6

P. P.

45500″ = 12° 38′ 20″ 4550″ = 1° 15′ 50″ S. 4.685 5396 T. 6453
45600 = 12 40 0 4560 = 1 16 0 5395 6456
45700 = 12 41 40 4570 = 1 16 10 5393 6459
45800 = 12 43 20 4580 = 1 16 20 5392 6462
45900 = 12 45 0 4590 = 1 16 30 5390 6466

N.	0	1	2	3	4	5	6	7	8	9
4600	662 7578	7673	7767	7862	7956	8050	8145	8239	8334	8428
01	8522	8617	8711	8805	8900	8994	9089	9183	9277	9372
02	9466	9561	9655	9749	9844	9938	0̄032	0̄127	0̄221	0̄315
03	663 0410	0504	0598	0693	0787	0881	0976	1070	1164	1259
04	1353	1447	1542	1636	1730	1825	1919	2013	2108	2202
05	2296	2391	2485	2579	2674	2768	2862	2956	3051	3145
06	3239	3334	3428	3522	3616	3711	3805	3899	3994	4088
07	4182	4276	4371	4465	4559	4653	4748	4842	4936	5030
08	5125	5219	5313	5407	5502	5596	5690	5784	5879	5973
09	6067	6161	6256	6350	6444	6538	6632	6727	6821	6915
4610	663 7009	7103	7198	7292	7386	7480	7574	7669	7763	7857
11	7951	8045	8140	8234	8328	8422	8516	8610	8705	8799
12	8893	8987	9081	9175	9270	9364	9458	9552	9646	9740
13	9835	9929	0̄023	0̄117	0̄211	0̄305	0̄399	0̄494	0̄588	0̄682
14	664 0776	0870	0964	1058	1152	1247	1341	1435	1529	1623
15	1717	1811	1905	1999	2093	2188	2282	2376	2470	2564
16	2658	2752	2846	2940	3034	3128	3222	3317	3411	3505
17	3599	3693	3787	3881	3975	4069	4163	4257	4351	4445
18	4539	4633	4727	4821	4915	5009	5104	5198	5292	5386
19	5480	5574	5668	5762	5856	5950	6044	6138	6232	6326
4620	664 6420	6514	6608	6702	6796	6890	6984	7078	7172	7266
21	7360	7454	7548	7642	7736	7830	7924	8018	8111	8205
22	8299	8393	8487	8581	8675	8769	8863	8957	9051	9145
23	9239	9333	9427	9521	9615	9709	9803	9896	9990	0̄084
24	665 0178	0272	0366	0460	0554	0648	0742	0836	0930	1023
25	1117	1211	1305	1399	1493	1587	1681	1775	1869	1962
26	2056	2150	2244	2338	2432	2526	2620	2713	2807	2901
27	2995	3089	3183	3277	3370	3464	3558	3652	3746	3840
28	3934	4027	4121	4215	4309	4403	4497	4590	4684	4778
29	4872	4966	5059	5153	5247	5341	5435	5529	5622	5716
4630	665 5810	5904	5998	6091	6185	6279	6373	6466	6560	6654
31	6748	6842	6935	7029	7123	7217	7310	7404	7498	7592
32	7686	7779	7873	7967	8061	8154	8248	8342	8436	8529
33	8623	8717	8810	8904	8998	9092	9185	9279	9373	9467
34	9560	9654	9748	9841	9935	0̄029	0̄123	0̄216	0̄310	0̄404
35	666 0497	0591	0685	0778	0872	0966	1060	1153	1247	1341
36	1434	1528	1622	1715	1809	1903	1996	2090	2184	2277
37	2371	2465	2558	2652	2746	2839	2933	3027	3120	3214
38	3307	3401	3495	3588	3682	3776	3869	3963	4056	4150
39	4244	4337	4431	4525	4618	4712	4805	4899	4993	5086
4640	666 5180	5273	5367	5461	5554	5648	5741	5835	5929	6022
41	6116	6209	6303	6396	6490	6584	6677	6771	6864	6958
42	7051	7145	7238	7332	7426	7519	7613	7706	7800	7893
43	7987	8080	8174	8267	8361	8454	8548	8642	8735	8829
44	8922	9016	9109	9203	9296	9390	9483	9577	9670	9764
45	9857	9951	0̄044	0̄138	0̄231	0̄325	0̄418	0̄512	0̄605	0̄699
46	667 0792	0886	0979	1072	1166	1259	1353	1446	1540	1633
47	1727	1820	1914	2007	2101	2194	2287	2381	2474	2568
48	2661	2755	2848	2941	3035	3128	3222	3315	3409	3502
49	3595	3689	3782	3876	3969	4063	4156	4249	4343	4436
4650	667 4530	4623	4716	4810	4903	4996	5090	5183	5277	5370
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	95
1	9.5
2	19.0
3	28.5
4	38.0
5	47.5
6	57.0
7	66.5
8	76.0
9	85.5

	94
1	9.4
2	18.8
3	28.2
4	37.6
5	47.0
6	56.4
7	65.8
8	75.2
9	84.6

	93
1	9.3
2	18.6
3	27.9
4	37.2
5	46.5
6	55.8
7	65.1
8	74.4
9	83.7

46000″ = 12°46′40″	4600″ = 1°16′40″	S. 4.685 5389	T. 6469
46100 = 12 48 20	4610 = 1 16 50	5387	6472
46200 = 12 50 0	4620 = 1 17 0	5386	6475
46300 = 12 51 40	4630 = 1 17 10	5384	6478
46400 = 12 53 20	4640 = 1 17 20	5382	6481

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4650	667 4530	4623	4716	4810	4903	4996	5090	5183	5277	5370	
51	5463	5557	5650	5744	5837	5930	6024	6117	6210	6304	
52	6397	6490	6584	6677	6770	6864	6957	7051	7144	7237	
53	7331	7424	7517	7611	7704	7797	7891	7984	8077	8170	
54	8264	8357	8450	8544	8637	8730	8824	8917	9010	9104	
55	9197	9290	9383	9477	9570	9663	9757	9850	9943	0̄036	
56	668 0130	0223	0316	0410	0503	0596	0689	0783	0876	0969	94 1 9.4 2 18.8 3 28.2 4 37.6 5 47.0 6 56.4 7 65.8 8 75.2 9 84.6
57	1062	1156	1249	1342	1435	1529	1622	1715	1808	1902	
58	1995	2088	2181	2275	2368	2461	2554	2647	2741	2834	
59	2927	3020	3114	3207	3300	3393	3486	3580	3673	3766	
4660	668 3859	3952	4046	4139	4232	4325	4418	4511	4605	4698	
61	4791	4884	4977	5071	5164	5257	5350	5443	5536	5630	
62	5723	5816	5909	6002	6095	6188	6282	6375	6468	6561	
63	6654	6747	6840	6934	7027	7120	7213	7306	7399	7492	
64	7585	7679	7772	7865	7958	8051	8144	8237	8330	8423	
65	8516	8610	8703	8796	8889	8982	9075	9168	9261	9354	
66	9447	9540	9633	9727	9820	9913	0̄006	0̄099	0̄192	0̄285	
67	669 0378	0471	0564	0657	0750	0843	0936	1029	1122	1215	
68	1308	1402	1495	1588	1681	1774	1867	1960	2053	2146	
69	2239	2332	2425	2518	2611	2704	2797	2890	2983	3076	
4670	669 3169	3262	3355	3448	3541	3634	3727	3820	3913	4006	
71	4099	4192	4285	4378	4471	4564	4656	4749	4842	4935	93 1 9.3 2 18.6 3 27.9 4 37.2 5 46.5 6 55.8 7 65.1 8 74.4 9 83.7
72	5028	5121	5214	5307	5400	5493	5586	5679	5772	5865	
73	5958	6051	6144	6237	6330	6422	6515	6608	6701	6794	
74	6887	6980	7073	7166	7259	7352	7445	7537	7630	7723	
75	7816	7909	8002	8095	8188	8281	8373	8466	8559	8652	
76	8745	8838	8931	9024	9117	9209	9302	9395	9488	9581	
77	9674	9767	9859	9952	0̄045	0̄138	0̄231	0̄324	0̄416	0̄509	
78	670 0602	0695	0788	0881	0974	1066	1159	1252	1345	1438	
79	1530	1623	1716	1809	1902	1995	2087	2180	2273	2366	
4680	670 2459	2551	2644	2737	2830	2922	3015	3108	3201	3294	
81	3386	3479	3572	3665	3758	3850	3943	4036	4129	4221	
82	4314	4407	4500	4592	4685	4778	4871	4963	5056	5149	
83	5242	5334	5427	5520	5613	5705	5798	5891	5983	6076	
84	6169	6262	6354	6447	6540	6632	6725	6818	6911	7003	
85	7096	7189	7281	7374	7467	7559	7652	7745	7837	7930	
86	8023	8116	8208	8301	8394	8486	8579	8672	8764	8857	92 1 9.2 2 18.4 3 27.6 4 36.8 5 46.0 6 55.2 7 64.4 8 73.6 9 82.8
87	8950	9042	9135	9228	9320	9413	9505	9598	9691	9783	
88	9876	9969	0̄061	0̄154	0̄247	0̄339	0̄432	0̄524	0̄617	0̄710	
89	671 0802	0895	0988	1080	1173	1265	1358	1451	1543	1636	
4690	671 1728	1821	1914	2006	2099	2191	2284	2377	2469	2562	
91	2654	2747	2839	2932	3025	3117	3210	3302	3395	3487	
92	3580	3673	3765	3858	3950	4043	4135	4228	4320	4413	
93	4506	4598	4691	4783	4876	4968	5061	5153	5246	5338	
94	5431	5523	5616	5708	5801	5893	5986	6078	6171	6263	
95	6356	6448	6541	6633	6726	6818	6911	7003	7096	7188	
96	7281	7373	7466	7558	7651	7743	7836	7928	8021	8113	
97	8206	8298	8391	8483	8575	8668	8760	8853	8945	9038	
98	9130	9223	9315	9407	9500	9592	9685	9777	9870	9962	
99	672 0054	0147	0239	0332	0424	0517	0609	0701	0794	0886	
4700	672 0979	1071	1163	1256	1348	1441	1533	1625	1718	1810	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

46500″ = 12° 55′ 0″	4650″ = 1° 17′ 30″	S. 4.685 5381	T. 6484
46600 = 12 56 40	4660 = 1 17 40	5379	6488
46700 = 12 58 20	4670 = 1 17 50	5378	6491
46800 = 13 0 0	4680 = 1 18 0	5376	6494
46900 = 13 1 40	4690 = 1 18 10	5374	6497

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4700	672 0979	1071	1163	1256	1348	1441	1533	1625	1718	1810	
01	1903	1995	2087	2180	2272	2364	2457	2549	2642	2734	
02	2826	2919	3011	3103	3196	3288	3380	3473	3565	3657	
03	3750	3842	3934	4027	4119	4211	4304	4396	4488	4581	
04	4673	4765	4858	4950	5042	5135	5227	5319	5412	5504	
05	5596	5689	5781	5873	5965	6058	6150	6242	6335	6427	
06	6519	6612	6704	6796	6888	6981	7073	7165	7257	7350	93
07	7442	7534	7627	7719	7811	7903	7996	8088	8180	8272	1 9.3
08	8365	8457	8549	8641	8734	8826	8918	9010	9102	9195	2 18.6
09	9287	9379	9471	9564	9656	9748	9840	9932	0̄025	0̄117	3 27.9
4710	673 0209	0301	0393	0486	0578	0670	0762	0854	0947	1039	4 37.2
11	1131	1223	1315	1408	1500	1592	1684	1776	1868	1961	5 46.5
12	2053	2145	2237	2329	2421	2514	2606	2698	2790	2882	6 55.8
13	2974	3067	3159	3251	3343	3435	3527	3619	3712	3804	7 65.1
14	3896	3988	4080	4172	4264	4356	4449	4541	4633	4725	8 74.4
15	4817	4909	5001	5093	5185	5277	5370	5462	5554	5646	9 83.7
16	5738	5830	5922	6014	6106	6198	6290	6383	6475	6567	
17	6659	6751	6843	6935	7027	7119	7211	7303	7395	7487	
18	7579	7671	7763	7856	7948	8040	8132	8224	8316	8408	
19	8500	8592	8684	8776	8868	8960	9052	9144	9236	9328	
4720	673 9420	9512	9604	9696	9788	9880	9972	0̄064	0̄156	0̄248	
21	674 0340	0432	0524	0616	0708	0800	0892	0984	1076	1168	92
22	1260	1352	1444	1536	1628	1720	1812	1904	1996	2088	1 9.2
23	2179	2271	2363	2455	2547	2639	2731	2823	2915	3007	2 18.4
24	3099	3191	3283	3375	3467	3559	3650	3742	3834	3926	3 27.6
25	4018	4110	4202	4294	4386	4478	4570	4661	4753	4845	4 36.8
26	4937	5029	5121	5213	5305	5397	5489	5580	5672	5764	5 46.0
27	5856	5948	6040	6132	6224	6315	6407	6499	6591	6683	6 55.2
28	6775	6867	6958	7050	7142	7234	7326	7418	7509	7601	7 64.4
29	7693	7785	7877	7969	8060	8152	8244	8336	8428	8520	8 73.6
4730	674 8611	8703	8795	8887	8979	9070	9162	9254	9346	9438	9 82.8
31	9529	9621	9713	9805	9897	9988	0̄080	0̄172	0̄264	0̄356	
32	675 0447	0539	0631	0723	0814	0906	0998	1090	1182	1273	
33	1365	1457	1549	1640	1732	1824	1916	2007	2099	2191	
34	2283	2374	2466	2558	2649	2741	2833	2925	3016	3108	
35	3200	3292	3383	3475	3567	3658	3750	3842	3934	4025	
36	4117	4209	4300	4392	4484	4575	4667	4759	4850	4942	91
37	5034	5126	5217	5309	5401	5492	5584	5676	5767	5859	1 9.1
38	5951	6042	6134	6226	6317	6409	6501	6592	6684	6775	2 18.2
39	6867	6959	7050	7142	7234	7325	7417	7509	7600	7692	3 27.3
4740	675 7783	7875	7967	8058	8150	8242	8333	8425	8516	8608	4 36.4
41	8700	8791	8883	8974	9066	9158	9249	9341	9432	9524	5 45.5
42	9615	9707	9799	9890	9982	0̄073	0̄165	0̄257	0̄348	0̄440	6 54.6
43	676 0531	0623	0714	0806	0897	0989	1081	1172	1264	1355	7 63.7
44	1447	1538	1630	1721	1813	1905	1996	2088	2179	2271	8 72.8
45	2362	2454	2545	2637	2728	2820	2911	3003	3094	3186	9 81.9
46	3277	3369	3460	3552	3643	3735	3826	3918	4009	4101	
47	4192	4284	4375	4467	4558	4650	4741	4833	4924	5016	
48	5107	5199	5290	5382	5473	5564	5656	5747	5839	5930	
49	6022	6113	6205	6296	6387	6479	6570	6662	6753	6845	
4750	676 6936	7028	7119	7210	7302	7393	7485	7576	7667	7759	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

47000″ = 13° 3′ 20″	4700″ = 1° 18′ 20″	S. 4.685 5373	T. 6500
47100 = 13 5 0	4710 = 1 18 30	5371	6504
47200 = 13 6 40	4720 = 1 18 40	5370	6507
47300 = 13 8 20	4730 = 1 18 50	5368	6510
47400 = 13 10 0	4740 = 1 19 0	5366	6513

N.	0	1	2	3	4	5	6	7	8	9
4750	676 6936	7028	7119	7210	7302	7393	7485	7576	7667	7759
51	7850	7942	8033	8125	8216	8307	8399	8490	8582	8673
52	8764	8856	8947	9038	9130	9221	9313	9404	9495	9587
53	9678	9770	9861	9952	0̄044	0̄135	0̄226	0̄318	0̄409	0̄500
54	677 0592	0683	0774	0866	0957	1049	1140	1231	1323	1414
55	1505	1597	1688	1779	1871	1962	2053	2145	2236	2327
56	2418	2510	2601	2692	2784	2875	2966	3058	3149	3240
57	3332	3423	3514	3605	3697	3788	3879	3971	4062	4153
58	4244	4336	4427	4518	4609	4701	4792	4883	4975	5066
59	5157	5248	5340	5431	5522	5613	5705	5796	5887	5978
4760	677 6070	6161	6252	6343	6434	6526	6617	6708	6799	6891
61	6982	7073	7164	7255	7347	7438	7529	7620	7712	7803
62	7894	7985	8076	8168	8259	8350	8441	8532	8623	8715
63	8806	8897	8988	9079	9171	9262	9353	9444	9535	9626
64	9718	9809	9900	9991	0̄082	0̄173	0̄264	0̄356	0̄447	0̄538
65	678 0629	0720	0811	0902	0994	1085	1176	1267	1358	1449
66	1540	1632	1723	1814	1905	1996	2087	2178	2269	2360
67	2452	2543	2634	2725	2816	2907	2998	3089	3180	3271
68	3362	3454	3545	3636	3727	3818	3909	4000	4091	4182
69	4273	4364	4455	4546	4637	4729	4820	4911	5002	5093
4770	678 5184	5275	5366	5457	5548	5639	5730	5821	5912	6003
71	6094	6185	6276	6367	6458	6549	6640	6731	6822	6913
72	7004	7095	7186	7277	7368	7459	7550	7641	7732	7823
73	7914	8005	8096	8187	8278	8369	8460	8551	8642	8733
74	8824	8915	9006	9097	9188	9279	9370	9461	9552	9643
75	9734	9825	9916	0̄007	0̄098	0̄188	0̄279	0̄370	0̄461	0̄552
76	679 0643	0734	0825	0916	1007	1098	1189	1280	1371	1461
77	1552	1643	1734	1825	1916	2007	2098	2189	2280	2371
78	2461	2552	2643	2734	2825	2916	3007	3098	3189	3279
79	3370	3461	3552	3643	3734	3825	3916	4006	4097	4188
4780	679 4279	4370	4461	4552	4642	4733	4824	4915	5006	5097
81	5187	5278	5369	5460	5551	5642	5732	5823	5914	6005
82	6096	6187	6277	6368	6459	6550	6641	6731	6822	6913
83	7004	7095	7185	7276	7367	7458	7549	7639	7730	7821
84	7912	8002	8093	8184	8275	8366	8456	8547	8638	8729
85	8819	8910	9001	9092	9182	9273	9364	9455	9545	9636
86	9727	9818	9908	9999	0̄090	0̄181	0̄271	0̄362	0̄453	0̄544
87	680 0634	0725	0816	0906	0997	1088	1179	1269	1360	1451
88	1541	1632	1723	1814	1904	1995	2086	2176	2267	2358
89	2448	2539	2630	2720	2811	2902	2992	3083	3174	3264
4790	680 3355	3446	3536	3627	3718	3808	3899	3990	4080	4171
91	4262	4352	4443	4534	4624	4715	4806	4896	4987	5077
92	5168	5259	5349	5440	5531	5621	5712	5802	5893	5984
93	6074	6165	6256	6346	6437	6527	6618	6709	6799	6890
94	6980	7071	7161	7252	7343	7433	7524	7614	7705	7796
95	7886	7977	8067	8158	8248	8339	8430	8520	8611	8701
96	8792	8882	8973	9063	9154	9244	9335	9426	9516	9607
97	9697	9788	9878	9969	0̄059	0̄150	0̄240	0̄331	0̄421	0̄512
98	681 0602	0693	0783	0874	0964	1055	1145	1236	1327	1417
99	1507	1598	1688	1779	1869	1960	2050	2141	2231	2322
4800	681 2412	2503	2593	2684	2774	2865	2955	3046	3136	3227
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	92
1	9.2
2	18.4
3	27.6
4	36.8
5	46.0
6	55.2
7	64.4
8	73.6
9	82.8

	91
1	9.1
2	18.2
3	27.3
4	36.4
5	45.5
6	54.6
7	63.7
8	72.8
9	81.9

	90
1	9.0
2	18.0
3	27.0
4	36.0
5	45.0
6	54.0
7	63.0
8	72.0
9	81.0

P. P.

47500″ = 13° 11′ 40″
47600 = 13 13 20
47700 = 13 15 0
47800 = 13 16 40
47900 = 13 18 20

4750″ = 1° 19′ 10″	S. 4.685 5365	T. 6516
4760 = 1 19 20	5363	6520
4770 = 1 19 30	5362	6523
4780 = 1 19 40	5360	6526
4790 = 1 19 50	5358	6529

N.	0	1	2	3	4	5	6	7	8	9
4800	681 2412	2503	2593	2684	2774	2865	2955	3046	3136	3227
01	3317	3408	3498	3588	3679	3769	3860	3950	4041	4131
02	4222	4312	4402	4493	4583	4674	4764	4855	4945	5035
03	5126	5216	5307	5397	5488	5578	5668	5759	5849	5940
04	6030	6120	6211	6301	6392	6482	6572	6663	6753	6844
05	6934	7024	7115	7205	7295	7386	7476	7567	7657	7747
06	7838	7928	8018	8109	8199	8289	8380	8470	8561	8651
07	8741	8832	8922	9012	9103	9193	9283	9374	9464	9554
08	9645	9735	9825	9916	0̄006	0̄096	0̄187	0̄277	0̄367	0̄457
09	682 0548	0638	0728	0819	0909	0999	1090	1180	1270	1360
4810	682 1451	1541	1631	1722	1812	1902	1992	2083	2173	2263
11	2354	2444	2534	2624	2715	2805	2895	2985	3076	3166
12	3256	3346	3437	3527	3617	3707	3798	3888	3978	4068
13	4159	4249	4339	4429	4520	4610	4700	4790	4880	4971
14	5061	5151	5241	5331	5422	5512	5602	5692	5783	5873
15	5963	6053	6143	6233	6324	6414	6504	6594	6684	6775
16	6865	6955	7045	7135	7225	7316	7406	7496	7586	7676
17	7766	7857	7947	8037	8127	8217	8307	8398	8488	8578
18	8668	8758	8848	8938	9029	9119	9209	9299	9389	9479
19	9569	9659	9750	9840	9930	0̄020	0̄110	0̄200	0̄290	0̄380
4820	683 0470	0560	0651	0741	0831	0921	1011	1101	1191	1281
21	1371	1461	1551	1642	1732	1822	1912	2002	2092	2182
22	2272	2362	2452	2542	2632	2722	2812	2902	2993	3083
23	3173	3263	3353	3443	3533	3623	3713	3803	3893	3983
24	4073	4163	4253	4343	4433	4523	4613	4703	4793	4883
25	4973	5063	5153	5243	5333	5423	5513	5603	5693	5783
26	5873	5963	6053	6143	6233	6323	6413	6503	6593	6683
27	6773	6863	6953	7043	7133	7223	7313	7403	7493	7583
28	7673	7763	7853	7942	8032	8122	8212	8302	8392	8482
29	8572	8662	8752	8842	8932	9022	9112	9202	9291	9381
4830	683 9471	9561	9651	9741	9831	9921	0̄011	0̄101	0̄191	0̄280
31	684 0370	0460	0550	0640	0730	0820	0910	1000	1089	1179
32	1269	1359	1449	1539	1629	1719	1808	1898	1988	2078
33	2168	2258	2348	2438	2527	2617	2707	2797	2887	2977
34	3066	3156	3246	3336	3426	3516	3605	3695	3785	3875
35	3965	4055	4144	4234	4324	4414	4504	4594	4683	4773
36	4863	4953	5043	5132	5222	5312	5402	5492	5581	5671
37	5761	5851	5940	6030	6120	6210	6300	6389	6479	6569
38	6659	6748	6838	6928	7018	7107	7197	7287	7377	7466
39	7556	7646	7736	7825	7915	8005	8095	8184	8274	8364
4840	684 8454	8543	8633	8723	8813	8902	8992	9082	9171	9261
41	9351	9441	9530	9620	9710	9799	9889	9979	0̄068	0̄158
42	685 0248	0338	0427	0517	0607	0696	0786	0876	0965	1055
43	1145	1234	1324	1414	1503	1593	1683	1772	1862	1952
44	2041	2131	2221	2310	2400	2490	2579	2669	2759	2848
45	2938	3027	3117	3207	3296	3386	3476	3565	3655	3744
46	3834	3924	4013	4103	4193	4282	4372	4461	4551	4641
47	4730	4820	4909	4999	5089	5178	5268	5357	5447	5537
48	5626	5716	5805	5895	5984	6074	6164	6253	6343	6432
49	6522	6611	6701	6791	6880	6970	7059	7149	7238	7328
4850	685 7417	7507	7596	7686	7776	7865	7955	8044	8134	8223
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	91
1	9.1
2	18.2
3	27.3
4	36.4
5	45.5
6	54.6
7	63.7
8	72.8
9	81.9

	90
1	9.0
2	18.0
3	27.0
4	36.0
5	45.0
6	54.0
7	63.0
8	72.0
9	81.0

	89
1	8.9
2	17.8
3	26.7
4	35.6
5	44.5
6	53.4
7	62.3
8	71.2
9	80.1

P. P.

48000″ = 13°20′ 0″ 4800″ = 1°20′ 0″ S. 4.685 5357 T. 6533
48100 = 13 21 40 4810 = 1 20 10 5355 6536
48200 = 13 23 20 4820 = 1 20 20 5353 6539
48300 = 13 25 0 4830 = 1 20 30 5352 6543
48400 = 13 26 40 4840 = 1 20 40 5350 6546

.	0	1	2	3	4	5	6	7	8	9	P. P.
50	685 7417	7507	7596	7686	7776	7865	7955	8044	8134	8223	
51	8313	8402	8492	8581	8671	8760	8850	8939	9029	9118	
52	9208	9297	9387	9476	9566	9655	9745	9834	9924	0̄013	
53	686 0103	0192	0282	0371	0461	0550	0640	0729	0819	0908	
54	0998	1087	1177	1266	1356	1445	1535	1624	1713	1803	
55	1892	1982	2071	2161	2250	2340	2429	2518	2608	2697	
56	2787	2876	2966	3055	3145	3234	3323	3413	3502	3592	90 1 9.0 2 18.0 3 27.0 4 36.0 5 45.0 6 54.0 7 63.0 8 72.0 9 81.0
57	3681	3770	3860	3949	4039	4128	4217	4307	4396	4486	
58	4575	4665	4754	4843	4933	5022	5111	5201	5290	5380	
59	5469	5558	5648	5737	5826	5916	6005	6095	6184	6273	
60	686 6363	6452	6541	6631	6720	6809	6899	6988	7078	7167	
61	7256	7346	7435	7524	7614	7703	7792	7882	7971	8060	
62	8150	8239	8328	8418	8507	8596	8685	8775	8864	8953	
63	9043	9132	9221	9311	9400	9489	9578	9668	9757	9846	
64	9936	0̄025	0̄114	0̄204	0̄293	0̄382	0̄471	0̄561	0̄650	0̄739	
65	687 0828	0918	1007	1096	1186	1275	1364	1453	1543	1632	
66	1721	1810	1900	1989	2078	2167	2257	2346	2435	2524	
67	2613	2703	2792	2881	2970	3060	3149	3238	3327	3416	
68	3506	3595	3684	3773	3863	3952	4041	4130	4219	4309	
69	4398	4487	4576	4665	4755	4844	4933	5022	5111	5200	
870	687 5290	5379	5468	5557	5646	5735	5825	5914	6003	6092	
71	6181	6270	6360	6449	6538	6627	6716	6805	6895	6984	89 1 8.9 2 17.8 3 26.7 4 35.6 5 44.5 6 53.4 7 62.3 8 71.2 9 80.1
72	7073	7162	7251	7340	7429	7518	7608	7697	7786	7875	
73	7964	8053	8142	8231	8321	8410	8499	8588	8677	8766	
74	8855	8944	9033	9123	9212	9301	9390	9479	9568	9657	
75	9746	9835	9924	0̄013	0̄103	0̄192	0̄281	0̄370	0̄459	0̄548	
76	688 0637	0726	0815	0904	0993	1082	1171	1260	1349	1439	
77	1528	1617	1706	1795	1884	1973	2062	2151	2240	2329	
78	2418	2507	2596	2685	2774	2863	2952	3041	3130	3219	
79	3308	3397	3486	3575	3664	3753	3842	3931	4020	4109	
4880	688 4198	4287	4376	4465	4554	4643	4732	4821	4910	4999	
81	5088	5177	5266	5355	5444	5533	5622	5711	5800	5889	
82	5978	6067	6156	6245	6334	6423	6511	6600	6689	6778	
83	6867	6956	7045	7134	7223	7312	7401	7490	7579	7668	
84	7757	7845	7934	8023	8112	8201	8290	8379	8468	8557	
85	8646	8735	8823	8912	9001	9090	9179	9268	9357	9446	
86	9535	9624	9712	9801	9890	9979	0̄068	0̄157	0̄246	0̄335	
87	689 0423	0512	0601	0690	0779	0868	0957	1045	1134	1223	88 1 8.8 2 17.6 3 26.4 4 35.2 5 44.0 6 52.8 7 61.6 8 70.4 9 79.2
88	1312	1401	1490	1579	1667	1756	1845	1934	2023	2112	
89	2200	2289	2378	2467	2556	2645	2733	2822	2911	3000	
4890	689 3089	3177	3266	3355	3444	3533	3621	3710	3799	3888	
91	3977	4065	4154	4243	4332	4421	4509	4598	4687	4776	
92	4864	4953	5042	5131	5220	5308	5397	5486	5575	5663	
93	5752	5841	5930	6018	6107	6196	6285	6373	6462	6551	
94	6640	6728	6817	6906	6995	7083	7172	7261	7350	7438	
95	7527	7616	7704	7793	7882	7971	8059	8148	8237	8325	
96	8414	8503	8591	8680	8769	8858	8946	9035	9124	9212	
97	9301	9390	9478	9567	9656	9744	9833	9922	0̄010	0̄099	
98	690 0188	0276	0365	0454	0542	0631	0720	0808	0897	0986	
99	1074	1163	1252	1340	1429	1518	1606	1695	1784	1872	
4900	690 1961	2049	2138	2227	2315	2404	2493	2581	2670	2758	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

48500″ = 13°28′20″	4850″ = 1°20′50″	S. 4.685 5348	T. 6549
48600 = 13 30 0	4860 = 1 21 0	5347	6552
48700 = 13 31 40	4870 = 1 21 10	5345	6556
48800 = 13 33 20	4880 = 1 21 20	5344	6559
48900 = 13 35 0	4890 = 1 21 30	5342	6562

N.	0	1	2	3	4	5	6	7	8	9	P. P.
4900	690 1961	2049	2138	2227	2315	2404	2493	2581	2670	2758	
01	2847	2936	3024	3113	3201	3290	3379	3467	3556	3644	
02	3733	3822	3910	3999	4087	4176	4265	4353	4442	4530	
03	4619	4708	4796	4885	4973	5062	5150	5239	5327	5416	
04	5505	5593	5682	5770	5859	5947	6036	6124	6213	6302	
05	6390	6479	6567	6656	6744	6833	6921	7010	7098	7187	
06	7275	7364	7452	7541	7630	7718	7807	7895	7984	8072	89
07	8161	8249	8338	8426	8515	8603	8692	8780	8869	8957	1 8.9
08	9046	9134	9223	9311	9399	9488	9576	9665	9753	9842	2 17.8
09	9930	0̄019	0̄107	0̄196	0̄284	0̄373	0̄461	0̄550	0̄638	0̄726	3 26.7
4910	691 0815	0903	0992	1080	1169	1257	1346	1434	1522	1611	4 35.6
11	1699	1788	1876	1965	2053	2141	2230	2318	2407	2495	5 44.5
12	2584	2672	2760	2849	2937	3026	3114	3202	3291	3379	6 53.4
13	3468	3556	3644	3733	3821	3910	3998	4086	4175	4263	7 62.3
14	4352	4440	4528	4617	4705	4793	4882	4970	5058	5147	8 71.2
15	5235	5324	5412	5500	5589	5677	5765	5854	5942	6030	9 80.1
16	6119	6207	6295	6384	6472	6560	6649	6737	6825	6914	
17	7002	7090	7179	7267	7355	7444	7532	7620	7709	7797	
18	7885	7974	8062	8150	8238	8327	8415	8503	8592	8680	
19	8768	8857	8945	9033	9121	9210	9298	9386	9474	9563	
4920	691 9651	9739	9828	9916	0̄004	0̄092	0̄181	0̄269	0̄357	0̄445	
21	692 0534	0622	0710	0798	0887	0975	1063	1151	1240	1328	88
22	1416	1504	1593	1681	1769	1857	1945	2034	2122	2210	1 8.8
23	2298	2387	2475	2563	2651	2739	2828	2916	3004	3092	2 17.6
24	3180	3269	3357	3445	3533	3621	3710	3798	3886	3974	3 26.4
25	4062	4151	4239	4327	4415	4503	4591	4680	4768	4856	4 35.2
26	4944	5032	5120	5209	5297	5385	5473	5561	5649	5737	5 44.0
27	5826	5914	6002	6090	6178	6266	6354	6443	6531	6619	6 52.8
28	6707	6795	6883	6971	7059	7148	7236	7324	7412	7500	7 61.6
29	7588	7676	7764	7853	7941	8029	8117	8205	8293	8381	8 70.4
4930	692 8469	8557	8645	8733	8822	8910	8998	9086	9174	9262	9 79.2
31	9350	9438	9526	9614	9702	9790	9878	9967	0̄055	0̄143	
32	693 0231	0319	0407	0495	0583	0671	0759	0847	0935	1023	
33	1111	1199	1287	1375	1463	1551	1639	1727	1815	1903	
34	1991	2079	2167	2256	2344	2432	2520	2608	2696	2784	
35	2872	2960	3048	3136	3224	3312	3400	3488	3576	3664	
36	3752	3839	3927	4015	4103	4191	4279	4367	4455	4543	87
37	4631	4719	4807	4895	4983	5071	5159	5247	5335	5423	1 8.7
38	5511	5599	5687	5775	5863	5951	6039	6126	6214	6302	2 17.4
39	6390	6478	6566	6654	6742	6830	6918	7006	7094	7182	3 26.1
4940	693 7269	7357	7445	7533	7621	7709	7797	7885	7973	8061	4 34.8
41	8149	8236	8324	8412	8500	8588	8676	8764	8852	8940	5 43.5
42	9027	9115	9203	9291	9379	9467	9555	9643	9730	9818	6 52.2
43	9906	9994	0̄082	0̄170	0̄258	0̄345	0̄433	0̄521	0̄609	0̄697	7 60.9
44	694 0785	0872	0960	1048	1136	1224	1312	1399	1487	1575	8 69.6
45	1663	1751	1839	1926	2014	2102	2190	2278	2366	2453	9 78.3
46	2541	2629	2717	2805	2892	2980	3068	3156	3244	3331	
47	3419	3507	3595	3682	3770	3858	3946	4034	4121	4209	
48	4297	4385	4472	4560	4648	4736	4824	4911	4999	5087	
49	5175	5262	5350	5438	5526	5613	5701	5789	5877	5964	
4950	694 6052	6140	6227	6315	6403	6491	6578	6666	6754	6842	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

49000″ = 13° 36′ 40″ 4900″ = 1° 21′ 40″ S. 4.685 5340 T. 6566
49100 = 13 38 20 4910 = 1 21 50 5339 6569
49200 = 13 40 0 4920 = 1 22 0 5337 6572
49300 = 13 41 40 4930 = 1 22 10 5335 6576
49400 = 13 43 20 4940 = 1 22 20 5333 6579

N.	0	1	2	3	4	5	6	7	8	9
4950	694 6052	6140	6227	6315	6403	6491	6578	6666	6754	6842
51	6929	7017	7105	7192	7280	7368	7456	7543	7631	7719
52	7806	7894	7982	8069	8157	8245	8333	8420	8508	8596
53	8683	8771	8859	8946	9034	9122	9209	9297	9385	9472
54	9560	9648	9735	9823	9911	9998	0̄086	0̄174	0̄261	0̄349
55	695 0437	0524	0612	0700	0787	0875	0962	1050	1138	1225
56	1313	1401	1488	1576	1663	1751	1839	1926	2014	2102
57	2189	2277	2364	2452	2540	2627	2715	2802	2890	2978
58	3065	3153	3240	3328	3416	3503	3591	3678	3766	3854
59	3941	4029	4116	4204	4291	4379	4467	4554	4642	4729
4960	695 4817	4904	4992	5079	5167	5255	5342	5430	5517	5605
61	5692	5780	5867	5955	6042	6130	6217	6305	6393	6480
62	6568	6655	6743	6830	6918	7005	7093	7180	7268	7355
63	7443	7530	7618	7705	7793	7880	7968	8055	8143	8230
64	8318	8405	8493	8580	8668	8755	8843	8930	9018	9105
65	9193	9280	9367	9455	9542	9630	9717	9805	9892	9980
66	696 0067	0155	0242	0330	0417	0504	0592	0679	0767	0854
67	0942	1029	1116	1204	1291	1379	1466	1554	1641	1728
68	1816	1903	1991	2078	2166	2253	2340	2428	2515	2603
69	2690	2777	2865	2952	3040	3127	3214	3302	3389	3477
4970	696 3564	3651	3739	3826	3913	4001	4088	4176	4263	4350
71	4438	4525	4612	4700	4787	4874	4962	5049	5137	5224
72	5311	5399	5486	5573	5661	5748	5835	5923	6010	6097
73	6185	6272	6359	6447	6534	6621	6709	6796	6883	6970
74	7058	7145	7232	7320	7407	7494	7582	7669	7756	7844
75	7931	8018	8105	8193	8280	8367	8455	8542	8629	8716
76	8804	8891	8978	9066	9153	9240	9327	9415	9502	9589
77	9676	9764	9851	9938	0̄025	0̄113	0̄200	0̄287	0̄374	0̄462
78	697 0549	0636	0723	0811	0898	0985	1072	1160	1247	1334
79	1421	1508	1596	1683	1770	1857	1945	2032	2119	2206
4980	697 2293	2381	2468	2555	2642	2729	2817	2904	2991	3078
81	3165	3253	3340	3427	3514	3601	3689	3776	3863	3950
82	4037	4124	4212	4299	4386	4473	4560	4647	4735	4822
83	4909	4996	5083	5170	5257	5345	5432	5519	5606	5693
84	5780	5867	5955	6042	6129	6216	6303	6390	6477	6565
85	6652	6739	6826	6913	7000	7087	7174	7261	7349	7436
86	7523	7610	7697	7784	7871	7958	8045	8132	8220	8307
87	8394	8481	8568	8655	8742	8829	8916	9003	9090	9177
88	9264	9352	9439	9526	9613	9700	9787	9874	9961	0̄048
89	698 0135	0222	0309	0396	0483	0570	0657	0744	0831	0918
4990	698 1005	1092	1180	1267	1354	1441	1528	1615	1702	1789
91	1876	1963	2050	2137	2224	2311	2398	2485	2572	2659
92	2746	2833	2920	3007	3094	3181	3268	3355	3442	3529
93	3616	3703	3790	3877	3964	4051	4138	4224	4311	4398
94	4485	4572	4659	4746	4833	4920	5007	5094	5181	5268
95	5355	5442	5529	5616	5703	5790	5877	5964	6050	6137
96	6224	6311	6398	6485	6572	6659	6746	6833	6920	7007
97	7093	7180	7267	7354	7441	7528	7615	7702	7789	7876
98	7963	8049	8136	8223	8310	8397	8484	8571	8658	8744
99	8831	8918	9005	9092	9179	9266	9353	9439	9526	9613
5000	698 9700	9787	9874	9961	0̄047	0̄134	0̄221	0̄308	0̄395	0̄482
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	88
1	8.8
2	17.6
3	26.4
4	35.2
5	44.0
6	52.8
7	61.6
8	70.4
9	79.2

	87
1	8.7
2	17.4
3	26.1
4	34.8
5	43.5
6	52.2
7	60.9
8	69.6
9	78.3

	86
1	8.6
2	17.2
3	25.8
4	34.4
5	43.0
6	51.6
7	60.2
8	68.8
9	77.4

P. P.

49500″ = 13° 45′ 0″ 4950″ = 1° 22′ 30″ S. 4.685 5332 T. 6583
49600 = 13 46 40 4960 = 1 22 40 5330 6586
49700 = 13 48 20 4970 = 1 22 50 5328 6589
49800 = 13 50 0 4980 = 1 23 0 5327 6593
49900 = 13 51 40 4990 = 1 23 10 5325 6596

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5000	698 9700	9787	9874	9961	0̄047	0̄134	0̄221	0̄308	0̄395	0̄482	
01	699 0569	0655	0742	0829	0916	1003	1090	1176	1263	1350	
02	1437	1524	1611	1697	1784	1871	1958	2045	2131	2218	
03	2305	2392	2479	2565	2652	2739	2826	2913	2999	3086	
04	3173	3260	3347	3433	3520	3607	3694	3780	3867	3954	
05	4041	4128	4214	4301	4388	4475	4561	4648	4735	4822	
06	4908	4995	5082	5169	5255	5342	5429	5516	5602	5689	
07	5776	5863	5949	6036	6123	6210	6296	6383	6470	6556	
08	6643	6730	6817	6903	6990	7077	7163	7250	7337	7424	
09	7510	7597	7684	7770	7857	7944	8031	8117	8204	8291	
5010	699 8377	8464	8551	8637	8724	8811	8897	8984	9071	9157	
11	9244	9331	9417	9504	9591	9677	9764	9851	9937	0̄024	87
12	700 0111	0197	0284	0371	0457	0544	0630	0717	0804	0890	1 8.7
13	0977	1064	1150	1237	1324	1410	1497	1583	1670	1757	2 17.4
14	1843	1930	2017	2103	2190	2276	2363	2450	2536	2623	3 26.1
15	2709	2796	2883	2969	3056	3142	3229	3316	3402	3489	4 34.8
16	3575	3662	3748	3835	3922	4008	4095	4181	4268	4354	5 43.5 6 52.2
17	4441	4528	4614	4701	4787	4874	4960	5047	5133	5220	7 60.9
18	5307	5393	5480	5566	5653	5739	5826	5912	5999	6085	8 69.6
19	6172	6258	6345	6432	6518	6605	6691	6778	6864	6951	9 78.3
5020	700 7037	7124	7210	7297	7383	7470	7556	7643	7729	7816	
21	7902	7989	8075	8162	8248	8335	8421	8508	8594	8681	
22	8767	8854	8940	9027	9113	9199	9286	9372	9459	9545	
23	9632	9718	9805	9891	9978	0̄064	0̄151	0̄237	0̄323	0̄410	
24	701 0496	0583	0669	0756	0842	0929	1015	1101	1188	1274	
25	1361	1447	1534	1620	1706	1793	1879	1966	2052	2138	
26	2225	2311	2398	2484	2570	2657	2743	2830	2916	3002	
27	3089	3175	3262	3348	3434	3521	3607	3694	3780	3866	
28	3953	4039	4125	4212	4298	4385	4471	4557	4644	4730	
29	4816	4903	4989	5075	5162	5248	5334	5421	5507	5594	
5030	701 5680	5766	5853	5939	6025	6112	6198	6284	6371	6457	
31	6543	6629	6716	6802	6888	6975	7061	7147	7234	7320	86
32	7406	7493	7579	7665	7752	7838	7924	8010	8097	8183	1 8.6
33	8269	8356	8442	8528	8614	8701	8787	8873	8960	9046	2 17.2
34	9132	9218	9305	9391	9477	9563	9650	9736	9822	9908	3 25.8
35	9995	0̄081	0̄167	0̄254	0̄340	0̄426	0̄512	0̄598	0̄685	0̄771	4 34.4
36	702 0857	0943	1030	1116	1202	1288	1375	1461	1547	1633	5 43.0 6 51.6
37	1720	1806	1892	1978	2064	2151	2237	2323	2409	2495	7 60.2
38	2582	2668	2754	2840	2926	3013	3099	3185	3271	3357	8 68.8
39	3444	3530	3616	3702	3788	3874	3961	4047	4133	4219	9 77.4
5040	702 4305	4392	4478	4564	4650	4736	4822	4909	4995	5081	
41	5167	5253	5339	5425	5512	5598	5684	5770	5856	5942	
42	6028	6115	6201	6287	6373	6459	6545	6631	6717	6804	
43	6890	6976	7062	7148	7234	7320	7406	7492	7579	7665	
44	7751	7837	7923	8009	8095	8181	8267	8353	8440	8526	
45	8612	8698	8784	8870	8956	9042	9128	9214	9300	9386	
46	9472	9559	9645	9731	9817	9903	9989	0̄075	0̄161	0̄247	
47	703 0333	0419	0505	0591	0677	0763	0849	0935	1021	1107	
48	1193	1279	1366	1452	1538	1624	1710	1796	1882	1968	
49	2054	2140	2226	2312	2398	2484	2570	2656	2742	2828	
5050	703 2914	3000	3086	3172	3258	3344	3430	3516	3602	3688	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

50000″ = 13°53′20″   5000″ = 1°23′20″   S. 4.685 5323   T. 6599
50100 = 13 55 0   5010 = 1 23 30   5322   6603
50200 = 13 56 40   5020 = 1 23 40   5320   6606
50300 = 13 58 20   5030 = 1 23 50   5318   6610
50400 = 14 0 0   5040 = 1 24 0   5317   6613

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5050	703 2914	3000	3086	3172	3258	3344	3430	3516	3602	3688	
51	3774	3860	3946	4032	4118	4204	4290	4376	4461	4547	
52	4633	4719	4805	4891	4977	5063	5149	5235	5321	5407	
53	5493	5579	5665	5751	5837	5923	6009	6095	6181	6266	
54	6352	6438	6524	6610	6696	6782	6868	6954	7040	7126	
55	7212	7298	7383	7469	7555	7641	7727	7813	7899	7985	
56	8071	8157	8242	8328	8414	8500	8586	8672	8758	8844	
57	8930	9015	9101	9187	9273	9359	9445	9531	9617	9702	
58	9788	9874	9960	0̄046	0̄132	0̄218	0̄303	0̄389	0̄475	0̄561	
59	704 0647	0733	0818	0904	0990	1076	1162	1248	1334	1419	
5060	704 1505	1591	1677	1763	1848	1934	2020	2106	2192	2278	
61	2363	2449	2535	2621	2707	2792	2878	2964	3050	3136	86
62	3221	3307	3393	3479	3565	3650	3736	3822	3908	3993	1 8.6
63	4079	4165	4251	4337	4422	4508	4594	4680	4765	4851	2 17.2
64	4937	5023	5108	5194	5280	5366	5452	5537	5623	5709	3 25.8
65	5794	5880	5966	6052	6137	6223	6309	6395	6480	6566	4 34.4
66	6652	6738	6823	6909	6995	7080	7166	7252	7338	7423	5 43.0 6 51.6
67	7509	7595	7680	7766	7852	7938	8023	8109	8195	8280	7 60.2
68	8366	8452	8537	8623	8709	8795	8880	8966	9052	9137	8 68.8
69	9223	9309	9394	9480	9566	9651	9737	9823	9908	9994	9 77.4
5070	705 0080	0165	0251	0337	0422	0508	0594	0679	0765	0850	
71	0936	1022	1107	1193	1279	1364	1450	1536	1621	1707	
72	1792	1878	1964	2049	2135	2221	2306	2392	2477	2563	
73	2649	2734	2820	2905	2991	3077	3162	3248	3333	3419	
74	3505	3590	3676	3761	3847	3933	4018	4104	4189	4275	
75	4360	4446	4532	4617	4703	4788	4874	4959	5045	5131	
76	5216	5302	5387	5473	5558	5644	5729	5815	5901	5986	
77	6072	6157	6243	6328	6414	6499	6585	6670	6756	6841	
78	6927	7012	7098	7184	7269	7355	7440	7526	7611	7697	
79	7782	7868	7953	8039	8124	8210	8295	8381	8466	8552	
5080	705 8637	8723	8808	8894	8979	9065	9150	9236	9321	9406	
81	9492	9577	9663	9748	9834	9919	0̄005	0̄090	0̄176	0̄261	85
82	706 0347	0432	0518	0603	0688	0774	0859	0945	1030	1116	1 8.5
83	1201	1287	1372	1457	1543	1628	1714	1799	1885	1970	2 17.0
84	2055	2141	2226	2312	2397	2483	2568	2653	2739	2824	3 25.5
85	2910	2995	3080	3166	3251	3337	3422	3507	3593	3678	4 34.0
86	3764	3849	3934	4020	4105	4190	4276	4361	4447	4532	5 42.5 6 51.0
87	4617	4703	4788	4873	4959	5044	5130	5215	5300	5386	7 59.5
88	5471	5556	5642	5727	5812	5898	5983	6068	6154	6239	8 68.0
89	6325	6410	6495	6581	6666	6751	6837	6922	7007	7092	9 76.5
5090	706 7178	7263	7348	7434	7519	7604	7690	7775	7860	7946	
91	8031	8116	8202	8287	8372	8457	8543	8628	8713	8799	
92	8884	8969	9055	9140	9225	9310	9396	9481	9566	9651	
93	9737	9822	9907	9993	0̄078	0̄163	0̄248	0̄334	0̄419	0̄504	
94	707 0589	0675	0760	0845	0930	1016	1101	1186	1271	1357	
95	1442	1527	1612	1698	1783	1868	1953	2039	2124	2209	
96	2294	2379	2465	2550	2635	2720	2805	2891	2976	3061	
97	3146	3232	3317	3402	3487	3572	3658	3743	3828	3913	
98	3998	4083	4169	4254	4339	4424	4509	4595	4680	4765	
99	4850	4935	5020	5106	5191	5276	5361	5446	5531	5617	
5100	707 5702	5787	5872	5957	6042	6128	6213	6298	6383	6468	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

50500″ = 14° 1′ 40″ 5050″ = 1° 24′ 10″ S. 4.685 5315 T. 6617
50600 = 14 3 20 5060 = 1 24 20 5313 6620
50700 = 14 5 0 5070 = 1 24 30 5311 6623
50800 = 14 6 40 5080 = 1 24 40 5310 6627
50900 = 14 8 20 5090 = 1 24 50 5308 6630

N.	0	1	2	3	4	5	6	7	8	9
5100	707 5702	5787	5872	5957	6042	6128	6213	6298	6383	6468
01	6553	6638	6724	6809	6894	6979	7064	7149	7234	7319
02	7405	7490	7575	7660	7745	7830	7915	8000	8085	8171
03	8256	8341	8426	8511	8596	8681	8766	8851	8936	9022
04	9107	9192	9277	9362	9447	9532	9617	9702	9787	9872
05	9957	0̄043	0̄128	0̄213	0̄298	0̄383	0̄468	0̄553	0̄638	0̄723
06	708 0808	0893	0978	1063	1148	1233	1318	1403	1488	1574
07	1659	1744	1829	1914	1999	2084	2169	2254	2339	2424
08	2509	2594	2679	2764	2849	2934	3019	3104	3189	3274
09	3359	3444	3529	3614	3699	3784	3869	3954	4039	4124
5110	708 4209	4294	4379	4464	4549	4634	4719	4804	4889	4974
11	5059	5144	5229	5314	5399	5484	5569	5654	5739	5823
12	5908	5993	6078	6163	6248	6333	6418	6503	6588	6673
13	6758	6843	6928	7013	7098	7183	7268	7352	7437	7522
14	7607	7692	7777	7862	7947	8032	8117	8202	8287	8371
15	8456	8541	8626	8711	8796	8881	8966	9051	9136	9220
16	9305	9390	9475	9560	9645	9730	9815	9900	9984	0̄069
17	709 0154	0239	0324	0409	0494	0579	0663	0748	0833	0918
18	1003	1088	1173	1257	1342	1427	1512	1597	1682	1766
19	1851	1936	2021	2106	2191	2275	2360	2445	2530	2615
5120	709 2700	2784	2869	2954	3039	3124	3209	3293	3378	3463
21	3548	3633	3717	3802	3887	3972	4057	4141	4226	4311
22	4396	4481	4565	4650	4735	4820	4904	4989	5074	5159
23	5244	5328	5413	5498	5583	5667	5752	5837	5922	6006
24	6091	6176	6261	6345	6430	6515	6600	6684	6769	6854
25	6939	7023	7108	7193	7278	7362	7447	7532	7617	7701
26	7786	7871	7955	8040	8125	8210	8294	8379	8464	8548
27	8633	8718	8803	8887	8972	9057	9141	9226	9311	9395
28	9480	9565	9650	9734	9819	9904	9988	0̄073	0̄158	0̄242
29	710 0327	0412	0496	0581	0666	0750	0835	0920	1004	1089
5130	710 1174	1258	1343	1428	1512	1597	1682	1766	1851	1936
31	2020	2105	2189	2274	2359	2443	2528	2613	2697	2782
32	2866	2951	3036	3120	3205	3290	3374	3459	3543	3628
33	3713	3797	3882	3966	4051	4136	4220	4305	4389	4474
34	4559	4643	4728	4812	4897	4982	5066	5151	5235	5320
35	5404	5489	5574	5658	5743	5827	5912	5996	6081	6166
36	6250	6335	6419	6504	6588	6673	6757	6842	6927	7011
37	7096	7180	7265	7349	7434	7518	7603	7687	7772	7856
38	7941	8026	8110	8195	8279	8364	8448	8533	8617	8702
39	8786	8871	8955	9040	9124	9209	9293	9378	9462	9547
5140	710 9631	9716	9800	9885	9969	0̄054	0̄138	0̄223	0̄307	0̄392
41	711 0476	0561	0645	0729	0814	0898	0983	1067	1152	1236
42	1321	1405	1490	1574	1659	1743	1827	1912	1996	2081
43	2165	2250	2334	2419	2503	2587	2672	2756	2841	2925
44	3010	3094	3178	3263	3347	3432	3516	3601	3685	3769
45	3854	3938	4023	4107	4191	4276	4360	4445	4529	4613
46	4698	4782	4867	4951	5035	5120	5204	5289	5373	5457
47	5542	5626	5710	5795	5879	5964	6048	6132	6217	6301
48	6385	6470	6554	6638	6723	6807	6892	6976	7060	7145
49	7229	7313	7398	7482	7566	7651	7735	7819	7904	7988
5150	711 8072	8157	8241	8325	8410	8494	8578	8663	8747	8831
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	86
1	8.6
2	17.2
3	25.8
4	34.4
5	43.0
6	51.6
7	60.2
8	68.8
9	77.4

	85
1	8.5
2	17.0
3	25.5
4	34.0
5	42.5
6	51.0
7	59.5
8	68.0
9	76.5

	84
1	8.4
2	16.8
3	25.2
4	33.6
5	42.0
6	50.4
7	58.8
8	67.2
9	75.6

P. P.

51000″ = 14° 10′ 0″	5100″ = 1° 25′ 0″	S. 4.685 5306	T. 6634
51100 = 14 11 40	5110 = 1 25 10	5304	6637
51200 = 14 13 20	5120 = 1 25 20	5303	6641
51300 = 14 15 0	5130 = 1 25 30	5301	6644
51400 = 14 16 40	5140 = 1 25 40	5299	6648

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5150	711 8072	8157	8241	8325	8410	8494	8578	8663	8747	8831	
51	8915	9000	9084	9168	9253	9337	9421	9506	9590	9674	
52	9759	9843	9927	0̄011	0̄096	0̄180	0̄264	0̄349	0̄433	0̄517	
53	712 0601	0686	0770	0854	0939	1023	1107	1191	1276	1360	
54	1444	1528	1613	1697	1781	1865	1950	2034	2118	2202	
55	2287	2371	2455	2539	2624	2708	2792	2876	2961	3045	
56	3129	3213	3298	3382	3466	3550	3634	3719	3803	3887	85 1 8.5 2 17.0 3 25.5 4 34.0 5 42.5 6 51.0 7 59.5 8 68.0 9 76.5
57	3971	4056	4140	4224	4308	4392	4477	4561	4645	4729	
58	4813	4898	4982	5066	5150	5234	5319	5403	5487	5571	
59	5655	5739	5824	5908	5992	6076	6160	6245	6329	6413	
5160	712 6497	6581	6665	6750	6834	6918	7002	7086	7170	7254	
61	7339	7423	7507	7591	7675	7759	7843	7928	8012	8096	
62	8180	8264	8348	8432	8517	8601	8685	8769	8853	8937	
63	9021	9105	9189	9274	9358	9442	9526	9610	9694	9778	
64	9862	9946	0̄031	0̄115	0̄199	0̄283	0̄367	0̄451	0̄535	0̄619	
65	713 0703	0787	0871	0956	1040	1124	1208	1292	1376	1460	
66	1544	1628	1712	1796	1880	1964	2048	2132	2217	2301	
67	2385	2469	2553	2637	2721	2805	2889	2973	3057	3141	
68	3225	3309	3393	3477	3561	3645	3729	3813	3897	3981	
69	4065	4149	4233	4317	4401	4485	4569	4653	4737	4821	
5170	713 4905	4989	5073	5157	5241	5325	5409	5493	5577	5661	
71	5745	5829	5913	5997	6081	6165	6249	6333	6417	6501	84 1 8.4 2 16.8 3 25.2 4 33.6 5 42.0 6 50.4 7 58.8 8 67.2 9 75.6
72	6585	6669	6753	6837	6921	7005	7089	7173	7257	7341	
73	7425	7509	7593	7677	7761	7845	7928	8012	8096	8180	
74	8264	8348	8432	8516	8600	8684	8768	8852	8936	9020	
75	9104	9187	9271	9355	9439	9523	9607	9691	9775	9859	
76	9943	0̄027	0̄110	0̄194	0̄278	0̄362	0̄446	0̄530	0̄614	0̄698	
77	714 0782	0866	0949	1033	1117	1201	1285	1369	1453	1537	
78	1620	1704	1788	1872	1956	2040	2124	2208	2291	2375	
79	2459	2543	2627	2711	2795	2878	2962	3046	3130	3214	
5180	714 3298	3381	3465	3549	3633	3717	3801	3884	3968	4052	
81	4136	4220	4304	4387	4471	4555	4639	4723	4806	4890	
82	4974	5058	5142	5226	5309	5393	5477	5561	5645	5728	
83	5812	5896	5980	6063	6147	6231	6315	6399	6482	6566	
84	6650	6734	6817	6901	6985	7069	7153	7236	7320	7404	
85	7488	7571	7655	7739	7823	7906	7990	8074	8158	8241	
86	8325	8409	8493	8576	8660	8744	8828	8911	8995	9079	83 1 8.3 2 16.6 3 24.9 4 33.2 5 41.5 6 49.8 7 58.1 8 66.4 9 74.7
87	9162	9246	9330	9414	9497	9581	9665	9749	9832	9916	
88	715 0000	0083	0167	0251	0335	0418	0502	0586	0669	0753	
89	0837	0920	1004	1088	1171	1255	1339	1423	1506	1590	
5190	715 1674	1757	1841	1925	2008	2092	2176	2259	2343	2427	
91	2510	2594	2678	2761	2845	2929	3012	3096	3180	3263	
92	3347	3430	3514	3598	3681	3765	3849	3932	4016	4100	
93	4183	4267	4350	4434	4518	4601	4685	4769	4852	4936	
94	5019	5103	5187	5270	5354	5438	5521	5605	5688	5772	
95	5856	5939	6023	6106	6190	6273	6357	6441	6524	6608	
96	6691	6775	6859	6942	7026	7109	7193	7276	7360	7444	
97	7527	7611	7694	7778	7861	7945	8029	8112	8196	8279	
98	8363	8446	8530	8613	8697	8780	8864	8948	9031	9115	
99	9198	9282	9365	9449	9532	9616	9699	9783	9866	9950	
5200	716 0033	0117	0200	0284	0367	0451	0535	0618	0702	0785	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

51500″ = 14°18′20″	5150″ = 1°25′50″	S. 4.685 5297	T. 6651
51600 = 14 20 0	5160 = 1 26 0	5296	6655
51700 = 14 21 40	5170 = 1 26 10	5294	6658
51800 = 14 23 20	5180 = 1 26 20	5292	6662
51900 = 14 25 0	5190 = 1 26 30	5290	6665

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5200	716 0033	0117	0200	0284	0367	0451	0535	0618	0702	0785	
01	0869	0952	1036	1119	1203	1286	1370	1453	1537	1620	
02	1703	1787	1870	1954	2037	2121	2204	2288	2371	2455	
03	2538	2622	2705	2789	2872	2956	3039	3123	3206	3289	
04	3373	3456	3540	3623	3707	3790	3874	3957	4040	4124	
05	4207	4291	4374	4458	4541	4625	4708	4791	4875	4958	84
06	5042	5125	5208	5292	5375	5459	5542	5626	5709	5792	1 8.4
07	5876	5959	6043	6126	6209	6293	6376	6460	6543	6626	2 16.8
08	6710	6793	6877	6960	7043	7127	7210	7293	7377	7460	3 25.2
09	7544	7627	7710	7794	7877	7960	8044	8127	8211	8294	4 33.6
5210	716 8377	8461	8544	8627	8711	8794	8877	8961	9044	9127	5 42.0
11	9211	9294	9377	9461	9544	9627	9711	9794	9877	9961	6 50.4
12	717 0044	0127	0211	0294	0377	0461	0544	0627	0711	0794	7 58.8
13	0877	0961	1044	1127	1210	1294	1377	1460	1544	1627	8 67.2
14	1710	1794	1877	1960	2043	2127	2210	2293	2377	2460	9 75.6
15	2543	2626	2710	2793	2876	2959	3043	3126	3209	3293	
16	3376	3459	3542	3626	3709	3792	3875	3959	4042	4125	
17	4208	4292	4375	4458	4541	4625	4708	4791	4874	4958	
18	5041	5124	5207	5290	5374	5457	5540	5623	5707	5790	
19	5873	5956	6039	6123	6206	6289	6372	6455	6539	6622	
5220	717 6705	6788	6871	6955	7038	7121	7204	7287	7371	7454	83
21	7537	7620	7703	7786	7870	7953	8036	8119	8202	8286	1 8.3
22	8369	8452	8535	8618	8701	8784	8868	8951	9034	9117	2 16.6
23	9200	9283	9367	9450	9533	9616	9699	9782	9865	9949	3 24.9
24	718 0032	0115	0198	0281	0364	0447	0530	0614	0697	0780	4 33.2
25	0863	0946	1029	1112	1195	1279	1362	1445	1528	1611	5 41.5
26	1694	1777	1860	1943	2026	2110	2193	2276	2359	2442	6 49.8
27	2525	2608	2691	2774	2857	2940	3023	3107	3190	3273	7 58.1
28	3356	3439	3522	3605	3688	3771	3854	3937	4020	4103	8 66.4
29	4186	4269	4353	4436	4519	4602	4685	4768	4851	4934	9 74.7
5230	718 5017	5100	5183	5266	5349	5432	5515	5598	5681	5764	
31	5847	5930	6013	6096	6179	6262	6345	6428	6511	6594	
32	6677	6760	6843	6926	7009	7092	7175	7258	7341	7424	
33	7507	7590	7673	7756	7839	7922	8005	8088	8171	8254	
34	8337	8420	8503	8586	8669	8752	8835	8918	9001	9084	
35	9167	9250	9333	9416	9499	9582	9665	9748	9830	9913	82
36	9996	$\bar{0}$079	$\bar{0}$162	$\bar{0}$245	$\bar{0}$328	$\bar{0}$411	$\bar{0}$494	$\bar{0}$577	$\bar{0}$660	$\bar{0}$743	1 8.2
37	719 0826	0909	0992	1075	1157	1240	1323	1406	1489	1572	2 16.4
38	1655	1738	1821	1904	1987	2069	2152	2235	2318	2401	3 24.6
39	2484	2567	2650	2733	2816	2898	2981	3064	3147	3230	4 32.8
5240	719 3313	3396	3479	3562	3644	3727	3810	3893	3976	4059	5 41.0
41	4142	4224	4307	4390	4473	4556	4639	4722	4804	4887	6 49.2
42	4970	5053	5136	5219	5302	5384	5467	5550	5633	5716	7 57.4
43	5799	5881	5964	6047	6130	6213	6296	6378	6461	6544	8 65.6
44	6627	6710	6792	6875	6958	7041	7124	7207	7289	7372	9 73.8
45	7455	7538	7621	7703	7786	7869	7952	8034	8117	8200	
46	8283	8366	8448	8531	8614	8697	8780	8862	8945	9028	
47	9111	9193	9276	9359	9442	9524	9607	9690	9773	9856	
48	9938	$\bar{0}$021	$\bar{0}$104	$\bar{0}$187	$\bar{0}$269	$\bar{0}$352	$\bar{0}$435	$\bar{0}$518	$\bar{0}$600	$\bar{0}$683	
49	720 0766	0848	0931	1014	1097	1179	1262	1345	1428	1510	
5250	720 1593	1676	1758	1841	1924	2007	2089	2172	2255	2337	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

52000″ = 14° 26′ 40″ 5200″ = 1° 26′ 40″ S. 4.685 5289 T. 6669
52100 = 14 28 20 5210 = 1 26 50 5287 6672
52200 = 14 30 0 5220 = 1 27 0 5285 6676
52300 = 14 31 40 5230 = 1 27 10 5283 6680
52400 = 14 33 20 5240 = 1 27 20 5282 6683

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5250	720 1593	1676	1758	1841	1924	2007	2089	2172	2255	2337	
51	2420	2503	2586	2668	2751	2834	2916	2999	3082	3164	
52	3247	3330	3413	3495	3578	3661	3743	3826	3909	3991	
53	4074	4157	4239	4322	4405	4487	4570	4653	4735	4818	
54	4901	4983	5066	5149	5231	5314	5397	5479	5562	5645	
55	5727	5810	5892	5975	6058	6140	6223	6306	6388	6471	
56	6554	6636	6719	6801	6884	6967	7049	7132	7215	7297	83
57	7380	7462	7545	7628	7710	7793	7875	7958	8041	8123	1 8.3
58	8206	8288	8371	8454	8536	8619	8701	8784	8867	8949	2 16.6
59	9032	9114	9197	9279	9362	9445	9527	9610	9692	9775	3 24.9
5260	720 9857	9940	0̄023	0̄105	0̄188	0̄270	0̄353	0̄435	0̄518	0̄600	4 33.2
61	721 0683	0766	0848	0931	1013	1096	1178	1261	1343	1426	5 41.5
62	1508	1591	1674	1756	1839	1921	2004	2086	2169	2251	6 49.8
63	2334	2416	2499	2581	2664	2746	2829	2911	2994	3076	7 58.1
64	3159	3241	3324	3406	3489	3571	3654	3736	3819	3901	8 66.4
65	3984	4066	4149	4231	4314	4396	4479	4561	4644	4726	9 74.7
66	4809	4891	4973	5056	5138	5221	5303	5386	5468	5551	
67	5633	5716	5798	5881	5963	6045	6128	6210	6293	6375	
68	6458	6540	6623	6705	6787	6870	6952	7035	7117	7200	
69	7282	7364	7447	7529	7612	7694	7777	7859	7941	8024	
5270	721 8106	8189	8271	8353	8436	8518	8601	8683	8765	8848	
71	8930	9013	9095	9177	9260	9342	9424	9507	9589	9672	82
72	9754	9836	9919	0̄001	0̄084	0̄166	0̄248	0̄331	0̄413	0̄495	1 8.2
73	722 0578	0660	0742	0825	0907	0990	1072	1154	1237	1319	2 16.4
74	1401	1484	1566	1648	1731	1813	1895	1978	2060	2142	3 24.6
75	2225	2307	2389	2472	2554	2636	2719	2801	2883	2966	4 32.8
76	3048	3130	3212	3295	3377	3459	3542	3624	3706	3789	5 41.0 6 49.2
77	3871	3953	4036	4118	4200	4282	4365	4447	4529	4612	7 57.4
78	4694	4776	4858	4941	5023	5105	5188	5270	5352	5434	8 65.6
79	5517	5599	5681	5763	5846	5928	6010	6092	6175	6257	9 73.8
5280	722 6339	6421	6504	6586	6668	6750	6833	6915	6997	7079	
81	7162	7244	7326	7408	7491	7573	7655	7737	7820	7902	
82	7984	8066	8148	8231	8313	8395	8477	8559	8642	8724	
83	8806	8888	8971	9053	9135	9217	9299	9382	9464	9546	
84	9628	9710	9792	9875	9957	0̄039	0̄121	0̄203	0̄286	0̄368	
85	723 0450	0532	0614	0696	0779	0861	0943	1025	1107	1189	
86	1272	1354	1436	1518	1600	1682	1765	1847	1929	2011	81
87	2093	2175	2257	2340	2422	2504	2586	2668	2750	2832	1 8.1
88	2914	2997	3079	3161	3243	3325	3407	3489	3571	3654	2 16.2
89	3736	3818	3900	3982	4064	4146	4228	4310	4393	4475	3 24.3
5290	723 4557	4639	4721	4803	4885	4967	5049	5131	5213	5296	4 32.4
91	5378	5460	5542	5624	5706	5788	5870	5952	6034	6116	5 40.5
92	6198	6280	6362	6445	6527	6609	6691	6773	6855	6937	6 48.6
93	7019	7101	7183	7265	7347	7429	7511	7593	7675	7757	7 56.7
94	7839	7921	8003	8085	8167	8250	8332	8414	8496	8578	8 64.8
95	8660	8742	8824	8906	8988	9070	9152	9234	9316	9398	9 72.9
96	9480	9562	9644	9726	9808	9890	9972	0̄054	0̄136	0̄218	
97	724 0300	0382	0464	0546	0628	0710	0792	0874	0956	1038	
98	1120	1202	1283	1365	1447	1529	1611	1693	1775	1857	
99	1939	2021	2103	2185	2267	2349	2431	2513	2595	2677	
5300	724 2759	2841	2923	3005	3086	3168	3250	3332	3414	3496	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

52500″ = 14°35′ 0″ 5250′ = 1°27′30″ S. 4.685 5280 T. 6687
52600 = 14 36 40 5260 = 1 27 40 5278 6690
52700 = 14 38 20 5270 = 1 27 50 5276 6694
52800 = 14 40 0 5280 = 1 28 0 5274 6697
52900 = 14 41 40 5290 = 1 28 10 5273 6701

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5300	724 2759	2841	2923	3005	3086	3168	3250	3332	3414	3496	
01	3578	3660	3742	3824	3906	3988	4070	4151	4233	4315	
02	4397	4479	4561	4643	4725	4807	4889	4971	5052	5134	
03	5216	5298	5380	5462	5544	5626	5708	5790	5871	5953	
04	6035	6117	6199	6281	6363	6445	6526	6608	6690	6772	
05	6854	6936	7018	7099	7181	7263	7345	7427	7509	7591	
06	7672	7754	7836	7918	8000	8082	8164	8245	8327	8409	
07	8491	8573	8655	8736	8818	8900	8982	9064	9146	9227	
08	9309	9391	9473	9555	9636	9718	9800	9882	9964	0̄045	
09	725 0127	0209	0291	0373	0454	0536	0618	0700	0782	0863	
5310	725 0945	1027	1109	1191	1272	1354	1436	1518	1599	1681	
11	1763	1845	1927	2008	2090	2172	2254	2335	2417	2499	82
12	2581	2662	2744	2826	2908	2989	3071	3153	3235	3316	1 8.2
13	3398	3480	3562	3643	3725	3807	3889	3970	4052	4134	2 16.4
14	4216	4297	4379	4461	4542	4624	4706	4788	4869	4951	3 24.6
15	5033	5114	5196	5278	5360	5441	5523	5605	5686	5768	4 32.8
16	5850	5931	6013	6095	6176	6258	6340	6422	6503	6585	5 41.0 6 49.2
17	6667	6748	6830	6912	6993	7075	7157	7238	7320	7402	7 57.4
18	7483	7565	7647	7728	7810	7892	7973	8055	8137	8218	8 65.6
19	8300	8382	8463	8545	8626	8708	8790	8871	8953	9035	9 73.8
5320	725 9116	9198	9280	9361	9443	9524	9606	9688	9769	9851	
21	9933	0̄014	0̄096	0̄177	0̄259	0̄341	0̄422	0̄504	0̄585	0̄667	
22	726 0749	0830	0912	0994	1075	1157	1238	1320	1401	1483	
23	1565	1646	1728	1809	1891	1973	2054	2136	2217	2299	
24	2380	2462	2544	2625	2707	2788	2870	2951	3033	3115	
25	3196	3278	3359	3441	3522	3604	3685	3767	3849	3930	
26	4012	4093	4175	4256	4338	4419	4501	4582	4664	4745	
27	4827	4908	4990	5072	5153	5235	5316	5398	5479	5561	
28	5642	5724	5805	5887	5968	6050	6131	6213	6294	6376	
29	6457	6539	6620	6702	6783	6865	6946	7028	7109	7191	
5330	726 7272	7354	7435	7517	7598	7679	7761	7842	7924	8005	
31	8087	8168	8250	8331	8413	8494	8576	8657	8739	8820	81
32	8901	8983	9064	9146	9227	9309	9390	9472	9553	9634	1 8.1
33	9716	9797	9879	9960	0̄042	0̄123	0̄204	0̄286	0̄367	0̄449	2 16.2
34	727 0530	0612	0693	0774	0856	0937	1019	1100	1181	1263	3 24.3
35	1344	1426	1507	1588	1670	1751	1833	1914	1995	2077	4 32.4
36	2158	2240	2321	2402	2484	2565	2647	2728	2809	2891	5 40.5 6 48.6
37	2972	3053	3135	3216	3298	3379	3460	3542	3623	3704	7 56.7
38	3786	3867	3948	4030	4111	4192	4274	4355	4437	4518	8 64.8
39	4599	4681	4762	4843	4925	5006	5087	5169	5250	5331	9 72.9
5340	727 5413	5494	5575	5657	5738	5819	5901	5982	6063	6144	
41	6226	6307	6388	6470	6551	6632	6714	6795	6876	6958	
42	7039	7120	7201	7283	7364	7445	7527	7608	7689	7770	
43	7852	7933	8014	8096	8177	8258	8339	8421	8502	8583	
44	8664	8746	8827	8908	8990	9071	9152	9233	9315	9396	
45	9477	9558	9640	9721	9802	9883	9965	0̄046	0̄127	0̄208	
46	728 0290	0371	0452	0533	0614	0696	0777	0858	0939	1021	
47	1102	1183	1264	1346	1427	1508	1589	1670	1752	1833	
48	1914	1995	2076	2158	2239	2320	2401	2482	2564	2645	
49	2726	2807	2888	2970	3051	3132	3213	3294	3375	3457	
5350	728 3538	3619	3700	3781	3863	3944	4025	4106	4187	4268	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

53000″ = 14°43′20″	5300″ = 1°28′20″	S 4.685 5271	T. 6705
53100 = 14 45 0	5310 = 1 28 30	5269	6708
53200 = 14 46 40	5320 = 1 28 40	5267	6712
53300 = 14 48 20	5330 = 1 28 50	5265	6715
53400 = 14 50 0	5340 = 1 29 0	5264	6719

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5350	728 3538	3619	3700	3781	3863	3944	4025	4106	4187	4268	
51	4350	4431	4512	4593	4674	4755	4836	4918	4999	5080	
52	5161	5242	5323	5404	5486	5567	5648	5729	5810	5891	
53	5972	6054	6135	6216	6297	6378	6459	6540	6621	6703	
54	6784	6865	6946	7027	7108	7189	7270	7351	7433	7514	
55	7595	7676	7757	7838	7919	8000	8081	8162	8244	8325	
56	8406	8487	8568	8649	8730	8811	8892	8973	9054	9135	
57	9216	9298	9379	9460	9541	9622	9703	9784	9865	9946	
58	729 0027	0108	0189	0270	0351	0432	0513	0594	0675	0757	
59	0838	0919	1000	1081	1162	1243	1324	1405	1486	1567	
5360	729 1648	1729	1810	1891	1972	2053	2134	2215	2296	2377	
61	2458	2539	2620	2701	2782	2863	2944	3025	3106	3187	81
62	3268	3349	3430	3511	3592	3673	3754	3835	3916	3997	1 8.1
63	4078	4159	4240	4321	4402	4483	4564	4645	4726	4807	2 16.2
64	4888	4969	5050	5131	5212	5292	5373	5454	5535	5616	3 24.3
65	5697	5778	5859	5940	6021	6102	6183	6264	6345	6426	4 32.4
66	6507	6588	6669	6749	6830	6911	6992	7073	7154	7235	5 40.5 6 48.6
67	7316	7397	7478	7559	7640	7721	7801	7882	7963	8044	7 56.7
68	8125	8206	8287	8368	8449	8530	8610	8691	8772	8853	8 64.8
69	8934	9015	9096	9177	9258	9338	9419	9500	9581	9662	9 72.9
5370	729 9743	9824	9905	9985	0̄066	0̄147	0̄228	0̄309	0̄390	0̄471	
71	730 0552	0632	0713	0794	0875	0956	1037	1118	1198	1279	
72	1360	1441	1522	1603	1683	1764	1845	1926	2007	2088	
73	2168	2249	2330	2411	2492	2573	2653	2734	2815	2896	
74	2977	3057	3138	3219	3300	3381	3461	3542	3623	3704	
75	3785	3865	3946	4027	4108	4189	4269	4350	4431	4512	
76	4593	4673	4754	4835	4916	4997	5077	5158	5239	5320	
77	5400	5481	5562	5643	5723	5804	5885	5966	6046	6127	
78	6208	6289	6369	6450	6531	6612	6692	6773	6854	6935	
79	7015	7096	7177	7258	7338	7419	7500	7581	7661	7742	
5380	730 7823	7903	7984	8065	8146	8226	8307	8388	8468	8549	
81	8630	8711	8791	8872	8953	9033	9114	9195	9276	9356	80
82	9437	9518	9598	9679	9760	9840	9921	0̄002	0̄082	0̄163	1 8.0
83	731 0244	0324	0405	0486	0567	0647	0728	0809	0889	0970	2 16.0
84	1051	1131	1212	1292	1373	1454	1534	1615	1696	1776	3 24.0
85	1857	1938	2018	2099	2180	2260	2341	2422	2502	2583	4 32.0
86	2663	2744	2825	2905	2986	3067	3147	3228	3309	3389	5 40.0 6 48.0
87	3470	3550	3631	3712	3792	3873	3953	4034	4115	4195	7 56.0
88	4276	4356	4437	4518	4598	4679	4759	4840	4921	5001	8 64.0
89	5082	5162	5243	5324	5404	5485	5565	5646	5727	5807	9 72.0
5390	731 5888	5968	6049	6129	6210	6291	6371	6452	6532	6613	
91	6693	6774	6854	6935	7016	7096	7177	7257	7338	7418	
92	7499	7579	7660	7740	7821	7902	7982	8063	8143	8224	
93	8304	8385	8465	8546	8626	8707	8787	8868	8948	9029	
94	9109	9190	9270	9351	9431	9512	9592	9673	9753	9834	
95	9914	9995	0̄075	0̄156	0̄236	0̄317	0̄397	0̄478	0̄558	0̄639	
96	732 0719	0800	0880	0961	1041	1122	1202	1283	1363	1444	
97	1524	1605	1685	1766	1846	1927	2007	2087	2168	2248	
98	2329	2409	2490	2570	2651	2731	2812	2892	2972	3053	
99	3133	3214	3294	3375	3455	3535	3616	3696	3777	3857	
5400	732 3938	4018	4098	4179	4259	4340	4420	4501	4581	4661	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

53500″ = 14°51′40″ 5350″ = 1°29′10″ S. 4.685 5262 T. 6723
53600 = 14 53 20 5360 = 1 29 20 5260 6726
53700 = 14 55 0 5370 = 1 29 30 5258 6730
53800 = 14 56 40 5380 = 1 29 40 5256 6734
53900 = 14 58 20 5390 = 1 29 50 5254 6737

N.	0	1	2	3	4	5	6	7	8	9	P.
5400	732 3938	4018	4098	4179	4259	4340	4420	4501	4581	4661	
01	4742	4822	4903	4983	5063	5144	5224	5305	5385	5465	
02	5546	5626	5707	5787	5867	5948	6028	6109	6189	6269	
03	6350	6430	6510	6591	6671	6752	6832	6912	6993	7073	
04	7153	7234	7314	7394	7475	7555	7636	7716	7796	7877	
05	7957	8037	8118	8198	8278	8359	8439	8519	8600	8680	
06	8760	8841	8921	9001	9082	9162	9242	9323	9403	9483	
07	9564	9644	9724	9805	9885	9965	0̄046	0̄126	0̄206	0̄287	1
08	733 0367	0447	0527	0608	0688	0768	0849	0929	1009	1090	2
09	1170	1250	1330	1411	1491	1571	1652	1732	1812	1892	3
5410	733 1973	2053	2133	2213	2294	2374	2454	2535	2615	2695	4
11	2775	2856	2936	3016	3096	3177	3257	3337	3417	3498	5 6
12	3578	3658	3738	3819	3899	3979	4059	4140	4220	4300	7
13	4380	4461	4541	4621	4701	4781	4862	4942	5022	5102	8
14	5183	5263	5343	5423	5503	5584	5664	5744	5824	5904	9
15	5985	6065	6145	6225	6305	6386	6466	6546	6626	6706	
16	6787	6867	6947	7027	7107	7187	7268	7348	7428	7508	
17	7588	7669	7749	7829	7909	7989	8069	8150	8230	8310	
18	8390	8470	8550	8630	8711	8791	8871	8951	9031	9111	
19	9192	9272	9352	9432	9512	9592	9672	9752	9833	9913	
5420	733 9993	0̄073	0̄153	0̄233	0̄313	0̄393	0̄474	0̄554	0̄634	0̄714	
21	734 0794	0874	0954	1034	1115	1195	1275	1355	1435	1515	
22	1595	1675	1755	1835	1916	1996	2076	2156	2236	2316	1
23	2396	2476	2556	2636	2716	2796	2877	2957	3037	3117	2
24	3197	3277	3357	3437	3517	3597	3677	3757	3837	3917	3
25	3997	4077	4158	4238	4318	4398	4478	4558	4638	4718	4
26	4798	4878	4958	5038	5118	5198	5278	5358	5438	5518	5 6
27	5598	5678	5758	5838	5918	5998	6078	6158	6238	6318	7
28	6398	6478	6558	6638	6718	6798	6878	6958	7038	7118	8
29	7198	7278	7358	7438	7518	7598	7678	7758	7838	7918	9
5430	734 7998	8078	8158	8238	8318	8398	8478	8558	8638	8718	
31	8798	8878	8958	9038	9118	9198	9278	9358	9438	9518	
32	9598	9678	9758	9837	9917	9997	0̄077	0̄157	0̄237	0̄317	
33	735 0397	0477	0557	0637	0717	0797	0877	0957	1036	1116	
34	1196	1276	1356	1436	1516	1596	1676	1756	1836	1916	
35	1995	2075	2155	2235	2315	2395	2475	2555	2635	2715	
36	2794	2874	2954	3034	3114	3194	3274	3354	3434	3513	
37	3593	3673	3753	3833	3913	3993	4073	4152	4232	4312	1
38	4392	4472	4552	4632	4711	4791	4871	4951	5031	5111	2
39	5191	5270	5350	5430	5510	5590	5670	5749	5829	5909	3
5440	735 5989	6069	6149	6228	6308	6388	6468	6548	6628	6707	4
41	6787	6867	6947	7027	7107	7186	7266	7346	7426	7506	5 6
42	7585	7665	7745	7825	7905	7984	8064	8144	8224	8304	7
43	8383	8463	8543	8623	8702	8782	8862	8942	9022	9101	8
44	9181	9261	9341	9420	9500	9580	9660	9740	9819	9899	9
45	9979	0̄059	0̄138	0̄218	0̄298	0̄378	0̄457	0̄537	0̄617	0̄697	
46	736 0776	0856	0936	1016	1095	1175	1255	1335	1414	1494	
47	1574	1653	1733	1813	1893	1972	2052	2132	2212	2291	
48	2371	2451	2530	2610	2690	2770	2849	2929	3009	3088	
49	3168	3248	3327	3407	3487	3567	3646	3726	3806	3885	
5450	736 3965	4045	4124	4204	4284	4363	4443	4523	4602	4682	
N.	0	1	2	3	4	5	6	7	8	9	P

54000″ = 15° 0′ 0″	5400″ = 1° 30′ 0″	S. 4.685 5253	T. 6741
54100 = 15 1 40	5410 = 1 30 10	5251	6745
54200 = 15 3 20	5420 = 1 30 20	5249	6748
54300 = 15 5 0	5430 = 1 30 30	5247	6752
54400 = 15 6 40	5440 = 1 30 40	5245	6756

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5450	736 3965	4045	4124	4204	4284	4363	4443	4523	4602	4682	
51	4762	4841	4921	5001	5080	5160	5240	5319	5399	5479	
52	5558	5638	5718	5797	5877	5957	6036	6116	6196	6275	
53	6355	6435	6514	6594	6674	6753	6833	6912	6992	7072	
54	7151	7231	7311	7390	7470	7549	7629	7709	7788	7868	
55	7948	8027	8107	8186	8266	8346	8425	8505	8584	8664	
56	8744	8823	8903	8982	9062	9142	9221	9301	9380	9460	
57	9540	9619	9699	9778	9858	9937	0̄017	0̄097	0̄176	0̄256	
58	737 0335	0415	0494	0574	0654	0733	0813	0892	0972	1051	
59	1131	1210	1290	1370	1449	1529	1608	1688	1767	1847	
5460	737 1926	2006	2086	2165	2245	2324	2404	2483	2563	2642	
61	2722	2801	2881	2960	3040	3119	3199	3278	3358	3437	80
62	3517	3596	3676	3755	3835	3914	3994	4074	4153	4233	1 8.0
63	4312	4392	4471	4550	4630	4709	4789	4868	4948	5027	2 16.0
64	5107	5186	5266	5345	5425	5504	5584	5663	5743	5822	3 24.0
65	5902	5981	6061	6140	6220	6299	6378	6458	6537	6617	4 32.0
66	6696	6776	6855	6935	7014	7094	7173	7252	7332	7411	5 40.0 6 48.0
67	7491	7570	7650	7729	7808	7888	7967	8047	8126	8206	7 56.0
68	8285	8364	8444	8523	8603	8682	8762	8841	8920	9000	8 64.0
69	9079	9159	9238	9317	9397	9476	9556	9635	9714	9794	9 72.0
5470	737 9873	9953	0̄032	0̄111	0̄191	0̄270	0̄350	0̄429	0̄508	0̄588	
71	738 0667	0747	0826	0905	0985	1064	1143	1223	1302	1382	
72	1461	1540	1620	1699	1778	1858	1937	2016	2096	2175	
73	2254	2334	2413	2493	2572	2651	2731	2810	2889	2969	
74	3048	3127	3207	3286	3365	3445	3524	3603	3683	3762	
75	3841	3921	4000	4079	4159	4238	4317	4396	4476	4555	
76	4634	4714	4793	4872	4952	5031	5110	5190	5269	5348	
77	5427	5507	5586	5665	5745	5824	5903	5982	6062	6141	
78	6220	6300	6379	6458	6537	6617	6696	6775	6854	6934	
79	7013	7092	7172	7251	7330	7409	7489	7568	7647	7726	
5480	738 7806	7885	7964	8043	8123	8202	8281	8360	8440	8519	
81	8598	8677	8756	8836	8915	8994	9073	9153	9232	9311	79
82	9390	9470	9549	9628	9707	9786	9866	9945	0̄024	0̄103	1 7.9
83	739 0182	0262	0341	0420	0499	0578	0658	0737	0816	0895	2 15.8
84	0974	1054	1133	1212	1291	1370	1450	1529	1608	1687	3 23.7
85	1766	1845	1925	2004	2083	2162	2241	2321	2400	2479	4 31.6
86	2558	2637	2716	2796	2875	2954	3033	3112	3191	3270	5 39.5 6 47.4
87	3350	3429	3508	3587	3666	3745	3824	3904	3983	4062	7 55.3
88	4141	4220	4299	4378	4458	4537	4616	4695	4774	4853	8 63.2
89	4932	5011	5091	5170	5249	5328	5407	5486	5565	5644	9 71.1
5490	739 5723	5803	5882	5961	6040	6119	6198	6277	6356	6435	
91	6514	6594	6673	6752	6831	6910	6989	7068	7147	7226	
92	7305	7384	7463	7543	7622	7701	7780	7859	7938	8017	
93	8096	8175	8254	8333	8412	8491	8570	8649	8728	8808	
94	8887	8966	9045	9124	9203	9282	9361	9440	9519	9598	
95	9677	9756	9835	9914	9993	0̄072	0̄151	0̄230	0̄309	0̄388	
96	740 0467	0546	0625	0704	0783	0862	0941	1020	1099	1178	
97	1257	1336	1415	1494	1573	1652	1731	1810	1889	1968	
98	2047	2126	2205	2284	2363	2442	2521	2600	2679	2758	
99	2837	2916	2995	3074	3153	3232	3311	3390	3469	3548	
5500	740 3627	3706	3785	3864	3943	4022	4101	4180	4259	4338	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

54500″ = 15° 8′ 20″	5450″ = 1° 30′ 50″	S. 4.685 5243	T. 6759
54600 = 15 10 0	5460 = 1 31 0	5241	6763
54700 = 15 11 40	5470 = 1 31 10	5240	6767
54800 = 15 13 20	5480 = 1 31 20	5238	6771
54900 = 15 15 0	5490 = 1 31 30	5236	6774

N.	0	1	2	3	4	5	6	7	8	9
5500	740 3627	3706	3785	3864	3943	4022	4101	4180	4259	4338
01	4416	4495	4574	4653	4732	4811	4890	4969	5048	5127
02	5206	5285	5364	5443	5522	5601	5679	5758	5837	5916
03	5995	6074	6153	6232	6311	6390	6469	6548	6626	6705
04	6784	6863	6942	7021	7100	7179	7258	7337	7415	7494
05	7573	7652	7731	7810	7889	7968	8047	8125	8204	8283
06	8362	8441	8520	8599	8678	8756	8835	8914	8993	9072
07	9151	9230	9308	9387	9466	9545	9624	9703	9782	9860
08	9939	$\bar{0}018$	$\bar{0}097$	$\bar{0}176$	$\bar{0}255$	$\bar{0}334$	$\bar{0}412$	$\bar{0}491$	$\bar{0}570$	$\bar{0}649$
09	741 0728	0807	0885	0964	1043	1122	1201	1280	1358	1437
5510	741 1516	1595	1674	1752	1831	1910	1989	2068	2146	2225
11	2304	2383	2462	2541	2619	2698	2777	2856	2935	3013
12	3092	3171	3250	3328	3407	3486	3565	3644	3722	3801
13	3880	3959	4037	4116	4195	4274	4353	4431	4510	4589
14	4668	4746	4825	4904	4983	5061	5140	5219	5298	5376
15	5455	5534	5613	5691	5770	5849	5928	6006	6085	6164
16	6243	6321	6400	6479	6557	6636	6715	6794	6872	6951
17	7030	7109	7187	7266	7345	7423	7502	7581	7660	7738
18	7817	7896	7974	8053	8132	8210	8289	8368	8447	8525
19	8604	8683	8761	8840	8919	8997	9076	9155	9233	9312
5520	741 9391	9469	9548	9627	9705	9784	9863	9941	$\bar{0}020$	$\bar{0}099$
21	742 0177	0256	0335	0413	0492	0571	0649	0728	0807	0885
22	0964	1043	1121	1200	1279	1357	1436	1515	1593	1672
23	1750	1829	1908	1986	2065	2144	2222	2301	2379	2458
24	2537	2615	2694	2773	2851	2930	3008	3087	3166	3244
25	3323	3401	3480	3559	3637	3716	3794	3873	3952	4030
26	4109	4187	4266	4345	4423	4502	4580	4659	4737	4816
27	4895	4973	5052	5130	5209	5288	5366	5445	5523	5602
28	5680	5759	5837	5916	5995	6073	6152	6230	6309	6387
29	6466	6544	6623	6702	6780	6859	6937	7016	7094	7173
5530	742 7251	7330	7408	7487	7565	7644	7722	7801	7880	7958
31	8037	8115	8194	8272	8351	8429	8508	8586	8665	8743
32	8822	8900	8979	9057	9136	9214	9293	9371	9450	9528
33	9607	9685	9764	9842	9921	9999	$\bar{0}078$	$\bar{0}156$	$\bar{0}235$	$\bar{0}313$
34	743 0392	0470	0549	0627	0705	0784	0862	0941	1019	1098
35	1176	1255	1333	1412	1490	1569	1647	1725	1804	1882
36	1961	2039	2118	2196	2275	2353	2431	2510	2588	2667
37	2745	2824	2902	2981	3059	3137	3216	3294	3373	3451
38	3530	3608	3686	3765	3843	3922	4000	4078	4157	4235
39	4314	4392	4470	4549	4627	4706	4784	4862	4941	5019
5540	743 5098	5176	5254	5333	5411	5490	5568	5646	5725	5803
41	5882	5960	6038	6117	6195	6273	6352	6430	6508	6587
42	6665	6744	6822	6900	6979	7057	7135	7214	7292	7370
43	7449	7527	7605	7684	7762	7841	7919	7997	8076	8154
44	8232	8311	8389	8467	8546	8624	8702	8781	8859	8937
45	9016	9094	9172	9250	9329	9407	9485	9564	9642	9720
46	9799	9877	9955	$\bar{0}034$	$\bar{0}112$	$\bar{0}190$	$\bar{0}268$	$\bar{0}347$	$\bar{0}425$	$\bar{0}503$
47	744 0582	0660	0738	0817	0895	0973	1051	1130	1208	1286
48	1365	1443	1521	1599	1678	1756	1834	1912	1991	2069
49	2147	2226	2304	2382	2460	2539	2617	2695	2773	2852
5550	744 2930	3008	3086	3165	3243	3321	3399	3478	3556	3634
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	79
1	7.9
2	15.8
3	23.7
4	31.6
5	39.5
6	47.4
7	55.3
8	63.2
9	71.1

	78
1	7.8
2	15.6
3	23.4
4	31.2
5	39.0
6	46.8
7	54.6
8	62.4
9	70.2

P. P.

		S.	T.
55000" = 15° 16′ 40"	5500" = 1° 31′ 40"	4.685 5234	6778
55100 = 15 18 20	5510 = 1 31 50	5232	6782
55200 = 15 20 0	5520 = 1 32 0	5230	6786
55300 = 15 21 40	5530 = 1 32 10	5228	6789
55400 = 15 23 20	5540 = 1 32 20	5226	6793

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5550	744 2930	3008	3086	3165	3243	3321	3399	3478	3556	3634	
51	3712	3791	3869	3947	4025	4103	4182	4260	4338	4416	
52	4495	4573	4651	4729	4807	4886	4964	5042	5120	5199	
53	5277	5355	5433	5511	5590	5668	5746	5824	5902	5981	
54	6059	6137	6215	6293	6372	6450	6528	6606	6684	6762	
55	6841	6919	6997	7075	7153	7232	7310	7388	7466	7544	
56	7622	7701	7779	7857	7935	8013	8091	8170	8248	8326	
57	8404	8482	8560	8638	8717	8795	8873	8951	9029	9107	
58	9185	9264	9342	9420	9498	9576	9654	9732	9810	9889	
59	9967	0̄045	0̄123	0̄201	0̄279	0̄357	0̄435	0̄514	0̄592	0̄670	
5560	745 0748	0826	0904	0982	1060	1138	1217	1295	1373	1451	78
61	1529	1607	1685	1763	1841	1919	1998	2076	2154	2232	1 7.8
62	2310	2388	2466	2544	2622	2700	2778	2856	2934	3013	2 15.6
63	3091	3169	3247	3325	3403	3481	3559	3637	3715	3793	3 23.4
64	3871	3949	4027	4105	4183	4261	4340	4418	4496	4574	4 31.2
65	4652	4730	4808	4886	4964	5042	5120	5198	5276	5354	5 39.0
66	5432	5510	5588	5666	5744	5822	5900	5978	6056	6134	6 46.8
67	6212	6290	6368	6446	6524	6602	6680	6758	6836	6914	7 54.6
68	6992	7070	7148	7226	7304	7382	7460	7538	7616	7694	8 62.4
69	7772	7850	7928	8006	8084	8162	8240	8318	8396	8474	9 70.2
5570	745 8552	8630	8708	8786	8864	8942	9020	9098	9176	9254	
71	9332	9410	9487	9565	9643	9721	9799	9877	9955	0̄033	
72	746 0111	0189	0267	0345	0423	0501	0579	0657	0735	0813	
73	0890	0968	1046	1124	1202	1280	1358	1436	1514	1592	
74	1670	1748	1825	1903	1981	2059	2137	2215	2293	2371	
75	2449	2527	2605	2682	2760	2838	2916	2994	3072	3150	
76	3228	3306	3383	3461	3539	3617	3695	3773	3851	3929	
77	4006	4084	4162	4240	4318	4396	4474	4552	4629	4707	
78	4785	4863	4941	5019	5097	5174	5252	5330	5408	5486	
79	5564	5641	5719	5797	5875	5953	6031	6108	6186	6264	
5580	746 6342	6420	6498	6575	6653	6731	6809	6887	6965	7042	77
81	7120	7198	7276	7354	7431	7509	7587	7665	7743	7821	1 7.7
82	7898	7976	8054	8132	8210	8287	8365	8443	8521	8598	2 15.4
83	8676	8754	8832	8910	8987	9065	9143	9221	9299	9376	3 23.1
84	9454	9532	9610	9687	9765	9843	9921	9998	0̄076	0̄154	4 30.8
85	747 0232	0310	0387	0465	0543	0621	0698	0776	0854	0932	5 38.5
86	1009	1087	1165	1243	1320	1398	1476	1554	1631	1709	6 46.2
87	1787	1864	1942	2020	2098	2175	2253	2331	2409	2486	7 53.9
88	2564	2642	2719	2797	2875	2953	3030	3108	3186	3263	8 61.6
89	3341	3419	3497	3574	3652	3730	3807	3885	3963	4040	9 69.3
5590	747 4118	4196	4273	4351	4429	4507	4584	4662	4740	4817	
91	4895	4973	5050	5128	5206	5283	5361	5439	5516	5594	
92	5672	5749	5827	5905	5982	6060	6138	6215	6293	6371	
93	6448	6526	6603	6681	6759	6836	6914	6992	7069	7147	
94	7225	7302	7380	7458	7535	7613	7690	7768	7846	7923	
95	8001	8079	8156	8234	8311	8389	8467	8544	8622	8699	
96	8777	8855	8932	9010	9087	9165	9243	9320	9398	9475	
97	9553	9631	9708	9786	9863	9941	0̄019	0̄096	0̄174	0̄251	
98	748 0329	0407	0484	0562	0639	0717	0794	0872	0950	1027	
99	1105	1182	1260	1337	1415	1492	1570	1648	1725	1803	
5600	748 1880	1958	2035	2113	2190	2268	2346	2423	2501	2578	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

55500″ = 15°25′ 0″ 5550″ = 1°32′ 30″ S. 4.685 5225 T. 6797
55600 = 15 26 40 5560 = 1 32 40 5223 6801
55700 = 15 28 20 5570 = 1 32 50 5221 6805
55800 = 15 30 0 5580 = 1 33 0 5219 6808
55900 = 15 31 40 5590 = 1 33 10 5217 6812

N.	0	1	2	3	4	5	6	7	8	9	P.
5600	748 1880	1958	2035	2113	2190	2268	2346	2423	2501	2578	
01	2656	2733	2811	2888	2966	3043	3121	3198	3276	3354	
02	3431	3509	3586	3664	3741	3819	3896	3974	4051	4129	
03	4206	4284	4361	4439	4516	4594	4671	4749	4826	4904	
04	4981	5059	5136	5214	5291	5369	5446	5524	5601	5679	
05	5756	5834	5911	5989	6066	6144	6221	6299	6376	6453	
06	6531	6608	6686	6763	6841	6918	6996	7073	7151	7228	
07	7306	7383	7460	7538	7615	7693	7770	7848	7925	8003	
08	8080	8157	8235	8312	8390	8467	8545	8622	8700	8777	
09	8854	8932	9009	9087	9164	9242	9319	9396	9474	9551	
5610	748 9629	9706	9783	9861	9938	$\bar{0}016$	$\bar{0}093$	$\bar{0}170$	$\bar{0}248$	$\bar{0}325$	
11	749 0403	0480	0557	0635	0712	0790	0867	0944	1022	1099	
12	1177	1254	1331	1409	1486	1564	1641	1718	1796	1873	1
13	1950	2028	2105	2183	2260	2337	2415	2492	2569	2647	2
14	2724	2801	2879	2956	3034	3111	3188	3266	3343	3420	3
15	3498	3575	3652	3730	3807	3884	3962	4039	4116	4194	4
16	4271	4348	4426	4503	4580	4658	4735	4812	4890	4967	5 6
17	5044	5122	5199	5276	5353	5431	5508	5585	5663	5740	7
18	5817	5895	5972	6049	6127	6204	6281	6358	6436	6513	8
19	6590	6668	6745	6822	6899	6977	7054	7131	7209	7286	9
5620	749 7363	7440	7518	7595	7672	7750	7827	7904	7981	8059	
21	8136	8213	8290	8368	8445	8522	8599	8677	8754	8831	
22	8908	8986	9063	9140	9217	9295	9372	9449	9526	9604	
23	9681	9758	9835	9913	9990	$\bar{0}067$	$\bar{0}144$	$\bar{0}221$	$\bar{0}299$	$\bar{0}376$	
24	750 0453	0530	0608	0685	0762	0839	0916	0994	1071	1148	
25	1225	1302	1380	1457	1534	1611	1688	1766	1843	1920	
26	1997	2074	2152	2229	2306	2383	2460	2538	2615	2692	
27	2769	2846	2924	3001	3078	3155	3232	3309	3387	3464	
28	3541	3618	3695	3772	3850	3927	4004	4081	4158	4235	
29	4312	4390	4467	4544	4621	4698	4775	4853	4930	5007	
5630	750 5084	5161	5238	5315	5392	5470	5547	5624	5701	5778	
31	5855	5932	6010	6087	6164	6241	6318	6395	6472	6549	
32	6626	6704	6781	6858	6935	7012	7089	7166	7243	7320	1
33	7398	7475	7552	7629	7706	7783	7860	7937	8014	8091	2
34	8168	8246	8323	8400	8477	8554	8631	8708	8785	8862	3
35	8939	9016	9093	9170	9247	9325	9402	9479	9556	9633	4
36	9710	9787	9864	9941	$\bar{0}018$	$\bar{0}095$	$\bar{0}172$	$\bar{0}249$	$\bar{0}326$	$\bar{0}403$	5 6
37	751 0480	0557	0634	0711	0789	0866	0943	1020	1097	1174	7
38	1251	1328	1405	1482	1559	1636	1713	1790	1867	1944	8
39	2021	2098	2175	2252	2329	2406	2483	2560	2637	2714	9
5640	751 2791	2868	2945	3022	3099	3176	3253	3330	3407	3484	
41	3561	3638	3715	3792	3869	3946	4023	4100	4177	4254	
42	4331	4408	4485	4562	4639	4716	4793	4870	4947	5024	
43	5101	5177	5254	5331	5408	5485	5562	5639	5716	5793	
44	5870	5947	6024	6101	6178	6255	6332	6409	6486	6563	
45	6639	6716	6793	6870	6947	7024	7101	7178	7255	7332	
46	7409	7486	7563	7639	7716	7793	7870	7947	8024	8101	
47	8178	8255	8332	8409	8485	8562	8639	8716	8793	8870	
48	8947	9024	9101	9178	9254	9331	9408	9485	9562	9639	
49	9716	9793	9870	9946	$\bar{0}023$	$\bar{0}100$	$\bar{0}177$	$\bar{0}254$	$\bar{0}331$	$\bar{0}408$	
5650	752 0484	0561	0638	0715	0792	0869	0946	1023	1099	1176	
N.	0	1	2	3	4	5	6	7	8	9	P.

$56000'' = 15^\circ 33' 20''$ $5600'' = 1^\circ 33' 20''$ S. 4.685 5215 T. 6816
$56100 = 15\ 35\ 0$ $5610 = 1\ 33\ 30$ 5213 6820
$56200 = 15\ 36\ 40$ $5620 = 1\ 33\ 40$ 5211 6824
$56300 = 15\ 38\ 20$ $5630 = 1\ 33\ 50$ 5209 6827
$56400 = 15\ 40\ 0$ $5640 = 1\ 34\ 0$ 5207 6831

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5650	752 0484	0561	0638	0715	0792	0869	0946	1023	1099	1176	
51	1253	1330	1407	1484	1560	1637	1714	1791	1868	1945	
52	2022	2098	2175	2252	2329	2406	2483	2559	2636	2713	
53	2790	2867	2944	3020	3097	3174	3251	3328	3404	3481	
54	3558	3635	3712	3788	3865	3942	4019	4096	4172	4249	
55	4326	4403	4480	4556	4633	4710	4787	4864	4940	5017	
56	5094	5171	5248	5324	5401	5478	5555	5631	5708	5785	
57	5862	5939	6015	6092	6169	6246	6322	6399	6476	6553	
58	6629	6706	6783	6860	6936	7013	7090	7167	7243	7320	
59	7397	7474	7550	7627	7704	7781	7857	7934	8011	8088	
5660	752 8164	8241	8318	8394	8471	8548	8625	8701	8778	8855	
61	8932	9008	9085	9162	9238	9315	9392	9469	9545	9622	77
62	9699	9775	9852	9929	0̄005	0̄082	0̄159	0̄236	0̄312	0̄389	1 7.7
63	753 0466	0542	0619	0696	0772	0849	0926	1002	1079	1156	2 15.4
64	1232	1309	1386	1462	1539	1616	1692	1769	1846	1922	3 23.1
65	1999	2076	2152	2229	2306	2382	2459	2536	2612	2689	4 30.8
66	2766	2842	2919	2996	3072	3149	3226	3302	3379	3455	5 38.5 6 46.2
67	3532	3609	3685	3762	3839	3915	3992	4069	4145	4222	7 53.9
68	4298	4375	4452	4528	4605	4682	4758	4835	4911	4988	8 61.6
69	5065	5141	5218	5294	5371	5448	5524	5601	5677	5754	9 69.3
5670	753 5831	5907	5984	6060	6137	6214	6290	6367	6443	6520	
71	6596	6673	6750	6826	6903	6979	7056	7133	7209	7286	
72	7362	7439	7515	7592	7668	7745	7822	7898	7975	8051	
73	8128	8204	8281	8357	8434	8511	8587	8664	8740	8817	
74	8893	8970	9046	9123	9199	9276	9353	9429	9506	9582	
75	9659	9735	9812	9888	9965	0̄041	0̄118	0̄194	0̄271	0̄347	
76	754 0424	0500	0577	0653	0730	0806	0883	0959	1036	1112	
77	1189	1265	1342	1418	1495	1571	1648	1724	1801	1877	
78	1954	2030	2107	2183	2260	2336	2413	2489	2566	2642	
79	2719	2795	2872	2948	3025	3101	3178	3254	3330	3407	
5680	754 3483	3560	3636	3713	3789	3866	3942	4019	4095	4171	
81	4248	4324	4401	4477	4554	4630	4707	4783	4859	4936	76
82	5012	5089	5165	5242	5318	5394	5471	5547	5624	5700	1 7.6
83	5777	5853	5929	6006	6082	6159	6235	6311	6388	6464	2 15.2
84	6541	6617	6694	6770	6846	6923	6999	7076	7152	7228	3 22.8
85	7305	7381	7457	7534	7610	7687	7763	7839	7916	7992	4 30.4
86	8069	8145	8221	8298	8374	8450	8527	8603	8680	8756	5 38.0 6 45.6
87	8832	8909	8985	9061	9138	9214	9290	9367	9443	9520	7 53.2
88	9596	9672	9749	9825	9901	9978	0̄054	0̄130	0̄207	0̄283	8 60.8
89	755 0359	0436	0512	0588	0665	0741	0817	0894	0970	1046	9 68.4
5690	755 1123	1199	1275	1352	1428	1504	1581	1657	1733	1810	
91	1886	1962	2038	2115	2191	2267	2344	2420	2496	2573	
92	2649	2725	2802	2878	2954	3030	3107	3183	3259	3336	
93	3412	3488	3564	3641	3717	3793	3870	3946	4022	4098	
94	4175	4251	4327	4403	4480	4556	4632	4709	4785	4861	
95	4937	5014	5090	5166	5242	5319	5395	5471	5547	5624	
96	5700	5776	5852	5929	6005	6081	6157	6233	6310	6386	
97	6462	6538	6615	6691	6767	6843	6920	6996	7072	7148	
98	7224	7301	7377	7453	7529	7606	7682	7758	7834	7910	
99	7987	8063	8139	8215	8291	8368	8444	8520	8596	8672	
5700	755 8749	8825	8901	8977	9053	9130	9206	9282	9358	9434	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

56500″ = 15° 41′ 40″	5650″ = 1° 34′ 10″	S. 4.685 5206	T. 6835
56600 = 15 43 20	5660 = 1 34 20	5204	6839
56700 = 15 45 0	5670 = 1 34 30	5202	6843
56800 = 15 46 40	5680 = 1 34 40	5200	6847
56900 = 15 48 20	5690 = 1 34 50	5198	6850

N.	0	1	2	3	4	5	6	7	8	9
5700	755 8749	8825	8901	8977	9053	9130	9206	9282	9358	9434
01	9510	9587	9663	9739	9815	9891	9967	0̄044	0̄120	0̄196
02	756 0272	0348	0424	0501	0577	0653	0729	0805	0881	0958
03	1034	1110	1186	1262	1338	1414	1491	1567	1643	1719
04	1795	1871	1947	2024	2100	2176	2252	2328	2404	2480
05	2556	2633	2709	2785	2861	2937	3013	3089	3165	3242
06	3318	3394	3470	3546	3622	3698	3774	3850	3927	4003
07	4079	4155	4231	4307	4383	4459	4535	4611	4687	4764
08	4840	4916	4992	5068	5144	5220	5296	5372	5448	5524
09	5600	5677	5753	5829	5905	5981	6057	6133	6209	6285
5710	756 6361	6437	6513	6589	6665	6741	6817	6893	6970	7046
11	7122	7198	7274	7350	7426	7502	7578	7654	7730	7806
12	7882	7958	8034	8110	8186	8262	8338	8414	8490	8566
13	8642	8718	8794	8870	8946	9022	9098	9174	9250	9326
14	9402	9478	9554	9630	9706	9782	9858	9934	0̄010	0̄086
15	757 0162	0238	0314	0390	0466	0542	0618	0694	0770	0846
16	0922	0998	1074	1150	1226	1302	1378	1454	1530	1606
17	1682	1758	1834	1910	1986	2062	2138	2214	2290	2366
18	2442	2517	2593	2669	2745	2821	2897	2973	3049	3125
19	3201	3277	3353	3429	3505	3581	3657	3733	3808	3884
5720	757 3960	4036	4112	4188	4264	4340	4416	4492	4568	4644
21	4719	4795	4871	4947	5023	5099	5175	5251	5327	5403
22	5479	5554	5630	5706	5782	5858	5934	6010	6086	6162
23	6237	6313	6389	6465	6541	6617	6693	6769	6845	6920
24	6996	7072	7148	7224	7300	7376	7451	7527	7603	7679
25	7755	7831	7907	7982	8058	8134	8210	8286	8362	8438
26	8513	8589	8665	8741	8817	8893	8968	9044	9120	9196
27	9272	9348	9423	9499	9575	9651	9727	9803	9878	9954
28	758 0030	0106	0182	0258	0333	0409	0485	0561	0637	0712
29	0788	0864	0940	1016	1091	1167	1243	1319	1395	1470
5730	758 1546	1622	1698	1774	1849	1925	2001	2077	2153	2228
31	2304	2380	2456	2531	2607	2683	2759	2835	2910	2986
32	3062	3138	3213	3289	3365	3441	3516	3592	3668	3744
33	3819	3895	3971	4047	4122	4198	4274	4350	4425	4501
34	4577	4653	4728	4804	4880	4956	5031	5107	5183	5258
35	5334	5410	5486	5561	5637	5713	5789	5864	5940	6016
36	6091	6167	6243	6319	6394	6470	6546	6621	6697	6773
37	6848	6924	7000	7076	7151	7227	7303	7378	7454	7530
38	7605	7681	7757	7832	7908	7984	8060	8135	8211	8287
39	8362	8438	8514	8589	8665	8741	8816	8892	8968	9043
5740	758 9119	9195	9270	9346	9422	9497	9573	9649	9724	9800
41	9875	9951	0̄027	0̄102	0̄178	0̄254	0̄329	0̄405	0̄481	0̄556
42	759 0632	0708	0783	0859	0934	1010	1086	1161	1237	1313
43	1388	1464	1539	1615	1691	1766	1842	1917	1993	2069
44	2144	2220	2296	2371	2447	2522	2598	2674	2749	2825
45	2900	2976	3052	3127	3203	3278	3354	3429	3505	3581
46	3656	3732	3807	3883	3959	4034	4110	4185	4261	4336
47	4412	4488	4563	4639	4714	4790	4865	4941	5016	5092
48	5168	5243	5319	5394	5470	5545	5621	5696	5772	5848
49	5923	5999	6074	6150	6225	6301	6376	6452	6527	6603
5750	759 6678	6754	6830	6905	6981	7056	7132	7207	7283	7358
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	77
1	7.7
2	15.4
3	23.1
4	30.8
5	38.5
6	46.2
7	53.9
8	61.6
9	69.3

	76
1	7.6
2	15.2
3	22.8
4	30.4
5	38.0
6	45.6
7	53.2
8	60.8
9	68.4

	75
1	7.5
2	15.0
3	22.5
4	30.0
5	37.5
6	45.0
7	52.5
8	60.0
9	67.5

P. P.

		S.	T.
57000″ = 15° 50′ 0″	5700″ = 1° 35′ 0″	S. 4.685 5196	T. 6854
57100 = 15 51 40	5710 = 1 35 10	5194	6858
57200 = 15 53 20	5720 = 1 35 20	5192	6862
57300 = 15 55 0	5730 = 1 35 30	5190	6866
57400 = 15 56 40	5740 = 1 35 40	5188	6870

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5750	759 6678	6754	6830	6905	6981	7056	7132	7207	7283	7358	
51	7434	7509	7585	7660	7736	7811	7887	7962	8038	8113	
52	8189	8264	8340	8415	8491	8566	8642	8717	8793	8868	
53	8944	9019	9095	9170	9246	9321	9397	9472	9548	9623	
54	9699	9774	9850	9925	0̄000	0̄076	0̄151	0̄227	0̄302	0̄378	
55	760 0453	0529	0604	0680	0755	0831	0906	0981	1057	1132	
56	1208	1283	1359	1434	1510	1585	1661	1736	1811	1887	76
57	1962	2038	2113	2189	2264	2339	2415	2490	2566	2641	1 7.6
58	2717	2792	2867	2943	3018	3094	3169	3245	3320	3395	2 15.2
59	3471	3546	3622	3697	3772	3848	3923	3999	4074	4149	3 22.8
5760	760 4225	4300	4376	4451	4526	4602	4677	4753	4828	4903	4 30.4
61	4979	5054	5130	5205	5280	5356	5431	5506	5582	5657	5 38.0
62	5733	5808	5883	5959	6034	6109	6185	6260	6335	6411	6 45.6
63	6486	6562	6637	6712	6788	6863	6938	7014	7089	7164	7 53.2
64	7240	7315	7390	7466	7541	7616	7692	7767	7842	7918	8 60.8
65	7993	8068	8144	8219	8294	8370	8445	8520	8596	8671	9 68.4
66	8746	8822	8897	8972	9048	9123	9198	9274	9349	9424	
67	9500	9575	9650	9725	9801	9876	9951	0̄027	0̄102	0̄177	
68	761 0253	0328	0403	0478	0554	0629	0704	0780	0855	0930	
69	1005	1081	1156	1231	1307	1382	1457	1532	1608	1683	
5770	761 1758	1833	1909	1984	2059	2134	2210	2285	2360	2435	
71	2511	2586	2661	2737	2812	2887	2962	3037	3113	3188	75
72	3263	3338	3414	3489	3564	3639	3715	3790	3865	3940	1 7.5
73	4016	4091	4166	4241	4316	4392	4467	4542	4617	4693	2 15.0
74	4768	4843	4918	4993	5069	5144	5219	5294	5369	5445	3 22.5
75	5520	5595	5670	5745	5821	5896	5971	6046	6121	6197	4 30.0
76	6272	6347	6422	6497	6573	6648	6723	6798	6873	6948	5 37.5
77	7024	7099	7174	7249	7324	7400	7475	7550	7625	7700	6 45.0
78	7775	7851	7926	8001	8076	8151	8226	8301	8377	8452	7 52.5
79	8527	8602	8677	8752	8828	8903	8978	9053	9128	9203	8 60.0
5780	761 9278	9354	9429	9504	9579	9654	9729	9804	9879	9955	9 67.5
81	762 0030	0105	0180	0255	0330	0405	0480	0556	0631	0706	
82	0781	0856	0931	1006	1081	1156	1232	1307	1382	1457	
83	1532	1607	1682	1757	1832	1907	1982	2058	2133	2208	
84	2283	2358	2433	2508	2583	2658	2733	2808	2883	2959	
85	3034	3109	3184	3259	3334	3409	3484	3559	3634	3709	
86	3784	3859	3934	4009	4085	4160	4235	4310	4385	4460	74
87	4535	4610	4685	4760	4835	4910	4985	5060	5135	5210	1 7.4
88	5285	5360	5435	5510	5585	5660	5735	5810	5885	5960	2 14.8
89	6035	6111	6186	6261	6336	6411	6486	6561	6636	6711	3 22.2
5790	762 6786	6861	6936	7011	7086	7161	7236	7311	7386	7461	4 29.6
91	7536	7611	7686	7761	7836	7911	7986	8061	8136	8211	5 37.0
92	8286	8361	8435	8510	8585	8660	8735	8810	8885	8960	6 44.4
93	9035	9110	9185	9260	9335	9410	9485	9560	9635	9710	7 51.8
94	9785	9860	9935	0̄010	0̄085	0̄160	0̄235	0̄310	0̄385	0̄459	8 59.2
95	763 0534	0609	0684	0759	0834	0909	0984	1059	1134	1209	9 66.6
96	1284	1359	1434	1509	1583	1658	1733	1808	1883	1958	
97	2033	2108	2183	2258	2333	2408	2482	2557	2632	2707	
98	2782	2857	2932	3007	3082	3157	3232	3306	3381	3456	
99	3531	3606	3681	3756	3831	3906	3980	4055	4130	4205	
5800	763 4280	4355	4430	4505	4579	4654	4729	4804	4879	4954	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

57500″ = 15° 58′ 20″ 5750″ = 1° 35′ 50″ S. 4.685 5186 T. 6874
57600 = 16 0 0 5760 = 1 36 0 5184 6878
57700 = 16 1 40 5770 = 1 36 10 5182 6882
57800 = 16 3 20 5780 = 1 36 20 5180 6886
57900 = 16 5 0 5790 = 1 36 30 5178 6890

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5800	763 4280	4355	4430	4505	4579	4654	4729	4804	4879	4954	
01	5029	5104	5178	5253	5328	5403	5478	5553	5628	5702	
02	5777	5852	5927	6002	6077	6151	6226	6301	6376	6451	
03	6526	6601	6675	6750	6825	6900	6975	7050	7124	7199	
04	7274	7349	7424	7499	7573	7648	7723	7798	7873	7947	
05	8022	8097	8172	8247	8321	8396	8471	8546	8621	8696	
06	8770	8845	8920	8995	9070	9144	9219	9294	9369	9443	
07	9518	9593	9668	9743	9817	9892	9967	0̄042	0̄117	0̄191	
08	764 0266	0341	0416	0490	0565	0640	0715	0789	0864	0939	
09	1014	1089	1163	1238	1313	1388	1462	1537	1612	1687	
5810	764 1761	1836	1911	1986	2060	2135	2210	2285	2359	2434	
11	2509	2583	2658	2733	2808	2882	2957	3032	3107	3181	75
12	3256	3331	3406	3480	3555	3630	3704	3779	3854	3929	1 7.5
13	4003	4078	4153	4227	4302	4377	4451	4526	4601	4676	2 15.0
14	4750	4825	4900	4974	5049	5124	5198	5273	5348	5423	3 22.5
15	5497	5572	5647	5721	5796	5871	5945	6020	6095	6169	4 30.0
16	6244	6319	6393	6468	6543	6617	6692	6767	6841	6916	5 37.5 6 45.0
17	6991	7065	7140	7215	7289	7364	7439	7513	7588	7663	7 52.5
18	7737	7812	7886	7961	8036	8110	8185	8260	8334	8409	8 60.0
19	8484	8558	8633	8707	8782	8857	8931	9006	9081	9155	9 67.5
5820	764 9230	9304	9379	9454	9528	9603	9678	9752	9827	9901	
21	9976	0̄051	0̄125	0̄200	0̄274	0̄349	0̄424	0̄498	0̄573	0̄647	
22	765 0722	0797	0871	0946	1020	1095	1170	1244	1319	1393	
23	1468	1542	1617	1692	1766	1841	1915	1990	2065	2139	
24	2214	2288	2363	2437	2512	2586	2661	2736	2810	2885	
25	2959	3034	3108	3183	3258	3332	3407	3481	3556	3630	
26	3705	3779	3854	3928	4003	4078	4152	4227	4301	4376	
27	4450	4525	4599	4674	4748	4823	4897	4972	5046	5121	
28	5195	5270	5344	5419	5493	5568	5643	5717	5792	5866	
29	5941	6015	6090	6164	6239	6313	6388	6462	6537	6611	
5830	765 6686	6760	6835	6909	6984	7058	7132	7207	7281	7356	
31	7430	7505	7579	7654	7728	7803	7877	7952	8026	8101	74
32	8175	8250	8324	8399	8473	8547	8622	8696	8771	8845	1 7.4
33	8920	8994	9069	9143	9218	9292	9366	9441	9515	9590	2 14.8
34	9664	9739	9813	9888	9962	0̄036	0̄111	0̄185	0̄260	0̄334	3 22.2
35	766 0409	0483	0557	0632	0706	0781	0855	0930	1004	1078	4 29.6
36	1153	1227	1302	1376	1450	1525	1599	1674	1748	1823	5 37.0 6 44.4
37	1897	1971	2046	2120	2195	2269	2343	2418	2492	2567	7 51.8
38	2641	2715	2790	2864	2938	3013	3087	3162	3236	3310	8 59.2
39	3385	3459	3534	3608	3682	3757	3831	3905	3980	4054	9 66.6
5840	766 4128	4203	4277	4352	4426	4500	4575	4649	4723	4798	
41	4872	4946	5021	5095	5169	5244	5318	5393	5467	5541	
42	5616	5690	5764	5839	5913	5987	6062	6136	6210	6285	
43	6359	6433	6508	6582	6656	6730	6805	6879	6953	7028	
44	7102	7176	7251	7325	7399	7474	7548	7622	7697	7771	
45	7845	7919	7994	8068	8142	8217	8291	8365	8440	8514	
46	8588	8662	8737	8811	8885	8960	9034	9108	9182	9257	
47	9331	9405	9479	9554	9628	9702	9777	9851	9925	9999	
48	767 0074	0148	0222	0296	0371	0445	0519	0593	0668	0742	
49	0816	0890	0965	1039	1113	1187	1262	1336	1410	1484	
5850	767 1559	1633	1707	1781	1856	1930	2004	2078	2153	2227	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

58000″ = 16° 6′ 40″	5800″ = 1° 36′ 40″	S. 4.685 5176	T. 6894
58100 = 16 8 20	5810 = 1 36 50	5174	6897
58200 = 16 10 0	5820 = 1 37 0	5172	6901
58300 = 16 11 40	5830 = 1 37 10	5170	6905
58400 = 16 13 20	5840 = 1 37 20	5168	6909

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5850	767 1559	1633	1707	1781	1856	1930	2004	2078	2153	2227	
51	2301	2375	2449	2524	2598	2672	2746	2821	2895	2969	
52	3043	3117	3191	3266	3340	3414	3488	3563	3637	3711	
53	3785	3859	3934	4008	4082	4156	4230	4305	4379	4453	
54	4527	4601	4676	4750	4824	4898	4972	5046	5121	5195	
55	5269	5343	5417	5492	5566	5640	5714	5788	5862	5937	
56	6011	6085	6159	6233	6307	6381	6456	6530	6604	6678	
57	6752	6826	6901	6975	7049	7123	7197	7271	7345	7420	
58	7494	7568	7642	7716	7790	7864	7938	8013	8087	8161	
59	8235	8309	8383	8457	8531	8606	8680	8754	8828	8902	
5860	767 8976	9050	9124	9198	9273	9347	9421	9495	9569	9643	
61	9717	9791	9865	9940	0̄014	0̄088	0̄162	0̄236	0̄310	0̄384	74 1 7.4 2 14.8 3 22.2 4 29.6 5 37.0 6 44.4 7 51.8 8 59.2 9 66.6
62	768 0458	0532	0606	0680	0754	0829	0903	0977	1051	1125	
63	1199	1273	1347	1421	1495	1569	1643	1717	1791	1866	
64	1940	2014	2088	2162	2236	2310	2384	2458	2532	2606	
65	2680	2754	2828	2902	2976	3050	3124	3198	3273	3347	
66	3421	3495	3569	3643	3717	3791	3865	3939	4013	4087	
67	4161	4235	4309	4383	4457	4531	4605	4679	4753	4827	
68	4901	4975	5049	5123	5197	5271	5345	5419	5493	5567	
69	5641	5715	5789	5863	5937	6011	6085	6159	6233	6307	
5870	768 6381	6455	6529	6603	6677	6751	6825	6899	6973	7047	
71	7121	7195	7269	7343	7417	7491	7565	7639	7713	7787	
72	7860	7934	8008	8082	8156	8230	8304	8378	8452	8526	
73	8600	8674	8748	8822	8896	8970	9044	9118	9192	9265	
74	9339	9413	9487	9561	9635	9709	9783	9857	9931	0̄005	
75	769 0079	0153	0227	0300	0374	0448	0522	0596	0670	0744	
76	0818	0892	0966	1040	1114	1187	1261	1335	1409	1483	
77	1557	1631	1705	1779	1852	1926	2000	2074	2148	2222	
78	2296	2370	2444	2517	2591	2665	2739	2813	2887	2961	
79	3035	3108	3182	3256	3330	3404	3478	3552	3620	3699	
5880	769 3773	3847	3921	3995	4069	4143	4216	4290	4364	4438	
81	4512	4586	4659	4733	4807	4881	4955	5029	5103	5176	73 1 7.3 2 14.6 3 21.9 4 29.2 5 36.5 6 43.8 7 51.1 8 58.4 9 65.7
82	5250	5324	5398	5472	5546	5619	5693	5767	5841	5915	
83	5988	6062	6136	6210	6284	6358	6431	6505	6579	6653	
84	6727	6800	6874	6948	7022	7096	7169	7243	7317	7391	
85	7465	7538	7612	7686	7760	7834	7907	7981	8055	8129	
86	8203	8276	8350	8424	8498	8571	8645	8719	8793	8867	
87	8940	9014	9088	9162	9235	9309	9383	9457	9530	9604	
88	9678	9752	9826	9899	9973	0̄047	0̄121	0̄194	0̄268	0̄342	
89	770 0416	0489	0563	0637	0711	0784	0858	0932	1005	1079	
5890	770 1153	1227	1300	1374	1448	1522	1595	1669	1743	1817	
91	1890	1964	2038	2111	2185	2259	2333	2406	2480	2554	
92	2627	2701	2775	2849	2922	2996	3070	3143	3217	3291	
93	3364	3438	3512	3585	3659	3733	3807	3880	3954	4028	
94	4101	4175	4249	4322	4396	4470	4543	4617	4691	4764	
95	4838	4912	4985	5059	5133	5206	5280	5354	5427	5501	
96	5575	5648	5722	5796	5869	5943	6017	6090	6164	6238	
97	6311	6385	6459	6532	6606	6679	6753	6827	6900	6974	
98	7048	7121	7195	7269	7342	7416	7489	7563	7637	7710	
99	7784	7858	7931	8005	8078	8152	8226	8299	8373	8447	
5900	770 8520	8594	8667	8741	8815	8888	8962	9035	9109	9183	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

58500″ = 16° 15′ 0″	5850′ = 1° 37′ 30″	S. 4.685 5166	T. 6913
58600 = 16 16 40	5860 = 1 37 40	5164	6917
58700 = 16 18 20	5870 = 1 37 50	5162	6921
58800 = 16 20 0	5880 = 1 38 0	5160	6925
58900 = 16 21 40	5890 = 1 38 10	5158	6929

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5900	770 8520	8594	8667	8741	8815	8888	8962	9035	9109	9183	
01	9256	9330	9403	9477	9551	9624	9698	9771	9845	9918	
02	9992	0̄066	0̄139	0̄213	0̄286	0̄360	0̄434	0̄507	0̄581	0̄654	
03	771 0728	0801	0875	0949	1022	1096	1169	1243	1316	1390	
04	1463	1537	1611	1684	1758	1831	1905	1978	2052	2125	
05	2199	2273	2346	2420	2493	2567	2640	2714	2787	2861	
06	2934	3008	3081	3155	3229	3302	3376	3449	3523	3596	
07	3670	3743	3817	3890	3964	4037	4111	4184	4258	4331	
08	4405	4478	4552	4625	4699	4772	4846	4919	4993	5066	
09	5140	5213	5287	5360	5434	5507	5581	5654	5728	5801	
5910	771 5875	5948	6022	6095	6169	6242	6316	6389	6463	6536	
11	6610	6683	6757	6830	6903	6977	7050	7124	7197	7271	74 1 7.4 2 14.8 3 22.2 4 29.6 5 37.0 6 44.4 7 51.8 8 59.2 9 66.6
12	7344	7418	7491	7565	7638	7712	7785	7858	7932	8005	
13	8079	8152	8226	8299	8373	8446	8519	8593	8666	8740	
14	8813	8887	8960	9034	9107	9180	9254	9327	9401	9474	
15	9547	9621	9694	9768	9841	9915	9988	0̄061	0̄135	0̄208	
16	772 0282	0355	0428	0502	0575	0649	0722	0795	0869	0942	
17	1016	1089	1162	1236	1309	1383	1456	1529	1603	1676	
18	1750	1823	1896	1970	2043	2117	2190	2263	2337	2410	
19	2483	2557	2630	2704	2777	2850	2924	2997	3070	3144	
5920	772 3217	3290	3364	3437	3510	3584	3657	3731	3804	3877	
21	3951	4024	4097	4171	4244	4317	4391	4464	4537	4611	
22	4684	4757	4831	4904	4977	5051	5124	5197	5271	5344	
23	5417	5491	5564	5637	5711	5784	5857	5931	6004	6077	
24	6150	6224	6297	6370	6444	6517	6590	6664	6737	6810	
25	6884	6957	7030	7103	7177	7250	7323	7397	7470	7543	
26	7616	7690	7763	7836	7910	7983	8056	8129	8203	8276	
27	8349	8423	8496	8569	8642	8716	8789	8862	8935	9009	
28	9082	9155	9228	9302	9375	9448	9521	9595	9668	9741	
29	9815	9888	9961	0̄034	0̄107	0̄181	0̄254	0̄327	0̄400	0̄474	
5930	773 0547	0620	0693	0767	0840	0913	0986	1060	1133	1206	
31	1279	1352	1426	1499	1572	1645	1719	1792	1865	1938	73 1 7.3 2 14.6 3 21.9 4 29.2 5 36.5 6 43.8 7 51.1 8 58.4 9 65.7
32	2011	2085	2158	2231	2304	2377	2451	2524	2597	2670	
33	2743	2817	2890	2963	3036	3109	3183	3256	3329	3402	
34	3475	3549	3622	3695	3768	3841	3915	3988	4061	4134	
35	4207	4280	4354	4427	4500	4573	4646	4719	4793	4866	
36	4939	5012	5085	5158	5232	5305	5378	5451	5524	5597	
37	5670	5744	5817	5890	5963	6036	6109	6183	6256	6329	
38	6402	6475	6548	6621	6694	6768	6841	6914	6987	7060	
39	7133	7206	7280	7353	7426	7499	7572	7645	7718	7791	
5940	773 7864	7938	8011	8084	8157	8230	8303	8376	8449	8522	
41	8596	8669	8742	8815	8888	8961	9034	9107	9180	9253	
42	9326	9400	9473	9546	9619	9692	9765	9838	9911	9984	
43	774 0057	0130	0203	0277	0350	0423	0496	0569	0642	0715	
44	0788	0861	0934	1007	1080	1153	1226	1299	1372	1446	
45	1519	1592	1665	1738	1811	1884	1957	2030	2103	2176	
46	2249	2322	2395	2468	2541	2614	2687	2760	2833	2906	
47	2979	3052	3125	3198	3271	3345	3418	3491	3564	3637	
48	3710	3783	3856	3929	4002	4075	4148	4221	4294	4367	
49	4440	4513	4586	4659	4732	4805	4878	4951	5024	5097	
5950	774 5170	5243	5316	5389	5462	5535	5608	5681	5754	5827	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

59000″ = 16° 23′ 20″ 5900″ = 1° 38′ 20″ S. 4.685 5156 T. 6933
59100 = 16 25 0 5910 = 1 38 30 5154 6937
59200 = 16 26 40 5920 = 1 38 40 5152 6941
59300 = 16 28 20 5930 = 1 38 50 5150 6945
59400 = 16 30 0 5940 = 1 39 0 5148 6949

N.	0	1	2	3	4	5	6	7	8	9	P. P.
5950	774 5170	5243	5316	5389	5462	5535	5608	5681	5754	5827	
51	5900	5972	6045	6118	6191	6264	6337	6410	6483	6556	
52	6629	6702	6775	6848	6921	6994	7067	7140	7213	7286	
53	7359	7432	7505	7578	7651	7724	7797	7869	7942	8015	
54	8088	8161	8234	8307	8380	8453	8526	8599	8672	8745	
55	8818	8891	8964	9036	9109	9182	9255	9328	9401	9474	
56	9547	9620	9693	9766	9839	9911	9984	0̄057	0̄130	0̄203	
57	775 0276	0349	0422	0495	0568	0641	0713	0786	0859	0932	
58	1005	1078	1151	1224	1297	1369	1442	1515	1588	1661	
59	1734	1807	1880	1952	2025	2098	2171	2244	2317	2390	
5960	775 2463	2535	2608	2681	2754	2827	2900	2973	3046	3118	
61	3191	3264	3337	3410	3483	3555	3628	3701	3774	3847	73
62	3920	3993	4065	4138	4211	4284	4357	4430	4502	4575	1 7.3
63	4648	4721	4794	4867	4939	5012	5085	5158	5231	5304	2 14.6
64	5376	5449	5522	5595	5668	5740	5813	5886	5959	6032	3 21.9
65	6104	6177	6250	6323	6396	6469	6541	6614	6687	6760	4 29.2
66	6832	6905	6978	7051	7124	7196	7269	7342	7415	7488	5 36.5 6 43.8
67	7560	7633	7706	7779	7851	7924	7997	8070	8143	8215	7 51.1
68	8288	8361	8434	8506	8579	8652	8725	8798	8870	8943	8 58.4
69	9016	9089	9161	9234	9307	9380	9452	9525	9598	9671	9 65.7
5970	775 9743	9816	9889	9962	0̄034	0̄107	0̄180	0̄253	0̄325	0̄398	
71	776 0471	0543	0616	0689	0762	0834	0907	0980	1053	1125	
72	1198	1271	1343	1416	1489	1562	1634	1707	1780	1852	
73	1925	1998	2071	2143	2216	2289	2361	2434	2507	2579	
74	2652	2725	2798	2870	2943	3016	3088	3161	3234	3306	
75	3379	3452	3524	3597	3670	3743	3815	3888	3961	4033	
76	4106	4179	4251	4324	4397	4469	4542	4615	4687	4760	
77	4833	4905	4978	5051	5123	5196	5269	5341	5414	5486	
78	5559	5632	5704	5777	5850	5922	5995	6068	6140	6213	
79	6286	6358	6431	6503	6576	6649	6721	6794	6867	6939	
5980	776 7012	7084	7157	7230	7302	7375	7448	7520	7593	7665	
81	7738	7811	7883	7956	8028	8101	8174	8246	8319	8391	72
82	8464	8537	8609	8682	8754	8827	8900	8972	9045	9117	1 7.2
83	9190	9263	9335	9408	9480	9553	9626	9698	9771	9843	2 14.4
84	9916	9988	0̄061	0̄134	0̄206	0̄279	0̄351	0̄424	0̄496	0̄569	3 21.6
85	777 0642	0714	0787	0859	0932	1004	1077	1149	1222	1295	4 28.8
86	1367	1440	1512	1585	1657	1730	1802	1875	1947	2020	5 36.0 6 43.2
87	2093	2165	2238	2310	2383	2455	2528	2600	2673	2745	7 50.4
88	2818	2890	2963	3035	3108	3181	3253	3326	3398	3471	8 57.6
89	3543	3616	3688	3761	3833	3906	3978	4051	4123	4196	9 64.8
5990	777 4268	4341	4413	4486	4558	4631	4703	4776	4848	4921	
91	4993	5066	5138	5211	5283	5356	5428	5501	5573	5646	
92	5718	5791	5863	5935	6008	6080	6153	6225	6298	6370	
93	6443	6515	6588	6660	6733	6805	6878	6950	7022	7095	
94	7167	7240	7312	7385	7457	7530	7602	7675	7747	7819	
95	7892	7964	8037	8109	8182	8254	8327	8399	8471	8544	
96	8616	8689	8761	8834	8906	8978	9051	9123	9196	9268	
97	9340	9413	9485	9558	9630	9703	9775	9847	9920	9992	
98	778 0065	0137	0209	0282	0354	0427	0499	0571	0644	0716	
99	0789	0861	0933	1006	1078	1151	1223	1295	1368	1440	
6000	778 1513	1585	1657	1730	1802	1874	1947	2019	2092	2164	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

59500″ = 16° 31′ 40″ 5950″ = 1° 39′ 10″ S. 4.685 5146 T. 6954
59600 = 16 33 20 5960 = 1 39 20 5144 6958
59700 = 16 35 0 5970 = 1 39 30 5142 6962
59800 = 16 36 40 5980 = 1 39 40 5140 6966
59900 = 16 38 20 5990 = 1 39 50 5138 6970

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6000	778 1513	1585	1657	1730	1802	1874	1947	2019	2092	2164	
01	2236	2309	2381	2453	2526	2598	2670	2743	2815	2888	
02	2960	3032	3105	3177	3249	3322	3394	3466	3539	3611	
03	3683	3756	3828	3900	3973	4045	4117	4190	4262	4335	
04	4407	4479	4552	4624	4696	4768	4841	4913	4985	5058	
05	5130	5202	5275	5347	5419	5492	5564	5636	5709	5781	
06	5853	5926	5998	6070	6143	6215	6287	6359	6432	6504	
07	6576	6649	6721	6793	6866	6938	7010	7082	7155	7227	
08	7299	7372	7444	7516	7588	7661	7733	7805	7877	7950	
09	8022	8094	8167	8239	8311	8383	8456	8528	8600	8672	
6010	778 8745	8817	8889	8962	9034	9106	9178	9251	9323	9395	
11	9467	9540	9612	9684	9756	9829	9901	9973	0̄045	0̄117	73 1 7.3 2 14.6 3 21.9 4 29.2 5 36.5 6 43.8 7 51.1 8 58.4 9 65.7
12	779 0190	0262	0334	0406	0479	0551	0623	0695	0768	0840	
13	0912	0984	1056	1129	1201	1273	1345	1418	1490	1562	
14	1634	1706	1779	1851	1923	1995	2067	2140	2212	2284	
15	2356	2429	2501	2573	2645	2717	2790	2862	2934	3006	
16	3078	3150	3223	3295	3367	3439	3511	3584	3656	3728	
17	3800	3872	3944	4017	4089	4161	4233	4305	4377	4450	
18	4522	4594	4666	4738	4810	4883	4955	5027	5099	5171	
19	5243	5316	5388	5460	5532	5604	5676	5748	5821	5893	
6020	779 5965	6037	6109	6181	6253	6326	6398	6470	6542	6614	
21	6686	6758	6831	6903	6975	7047	7119	7191	7263	7335	
22	7408	7480	7552	7624	7696	7768	7840	7912	7984	8057	
23	8129	8201	8273	8345	8417	8489	8561	8633	8705	8778	
24	8850	8922	8994	9066	9138	9210	9282	9354	9426	9498	
25	9571	9643	9715	9787	9859	9931	0̄003	0̄075	0̄147	0̄219	
26	780 0291	0363	0435	0507	0580	0652	0724	0796	0868	0940	
27	1012	1084	1156	1228	1300	1372	1444	1516	1588	1660	
28	1732	1804	1877	1949	2021	2093	2165	2237	2309	2381	
29	2453	2525	2597	2669	2741	2813	2885	2957	3029	3101	
6030	780 3173	3245	3317	3389	3461	3533	3605	3677	3749	3821	
31	3893	3965	4037	4109	4181	4253	4325	4397	4469	4541	72 1 7.2 2 14.4 3 21.6 4 28.8 5 36.0 6 43.2 7 50.4 8 57.6 9 64.8
32	4613	4685	4757	4829	4901	4973	5045	5117	5189	5261	
33	5333	5405	5477	5549	5621	5693	5765	5837	5909	5981	
34	6053	6125	6197	6269	6341	6413	6485	6557	6629	6701	
35	6773	6845	6917	6989	7061	7133	7204	7276	7348	7420	
36	7492	7564	7636	7708	7780	7852	7924	7996	8068	8140	
37	8212	8284	8356	8428	8500	8571	8643	8715	8787	8859	
38	8931	9003	9075	9147	9219	9291	9363	9435	9506	9578	
39	9650	9722	9794	9866	9938	0̄010	0̄082	0̄154	0̄226	0̄297	
6040	781 0369	0441	0513	0585	0657	0729	0801	0873	0945	1016	
41	1088	1160	1232	1304	1376	1448	1520	1592	1663	1735	
42	1807	1879	1951	2023	2095	2167	2238	2310	2382	2454	
43	2526	2598	2670	2742	2813	2885	2957	3029	3101	3173	
44	3245	3316	3388	3460	3532	3604	3676	3748	3819	3891	
45	3963	4035	4107	4179	4250	4322	4394	4466	4538	4610	
46	4681	4753	4825	4897	4969	5041	5112	5184	5256	5328	
47	5400	5472	5543	5615	5687	5759	5831	5902	5974	6046	
48	6118	6190	6261	6333	6405	6477	6549	6620	6692	6764	
49	6836	6908	6979	7051	7123	7195	7267	7338	7410	7482	
6050	781 7554	7626	7697	7769	7841	7913	7984	8056	8128	8200	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

60000″ = 16° 40′ 0″	6000″ = 1° 40′ 0″	S. 4.685 5136	T. 6974
60100 = 16 41 40	6010 = 1 40 10	5134	6978
60200 = 16 43 20	6020 = 1 40 20	5132	6982
60300 = 16 45 0	6030 = 1 40 30	5130	6986
60400 = 16 46 40	6040 = 1 40 40	5128	6990

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6050	781 7554	7626	7697	7769	7841	7913	7984	8056	8128	8200	
51	8272	8343	8415	8487	8559	8630	8702	8774	8846	8917	
52	8989	9061	9133	9204	9276	9348	9420	9491	9563	9635	
53	9707	9778	9850	9922	9994	$\bar{0}065$	$\bar{0}137$	$\bar{0}209$	$\bar{0}281$	$\bar{0}352$	
54	782 0424	0496	0568	0639	0711	0783	0855	0926	0998	1070	
55	1141	1213	1285	1357	1428	1500	1572	1644	1715	1787	
56	1859	1930	2002	2074	2146	2217	2289	2361	2432	2504	
57	2576	2647	2719	2791	2863	2934	3006	3078	3149	3221	
58	3293	3364	3436	3508	3579	3651	3723	3794	3866	3938	
59	4010	4081	4153	4225	4296	4368	4440	4511	4583	4655	
6060	782 4726	4798	4870	4941	5013	5085	5156	5228	5300	5371	
61	5443	5514	5586	5658	5729	5801	5873	5944	6016	6088	72 1 7.2 2 14.4 3 21.6 4 28.8 5 36.0 6 43.2 7 50.4 8 57.6 9 64.8
62	6159	6231	6303	6374	6446	6518	6589	6661	6732	6804	
63	6876	6947	7019	7091	7162	7234	7305	7377	7449	7520	
64	7592	7664	7735	7807	7878	7950	8022	8093	8165	8236	
65	8308	8380	8451	8523	8594	8666	8738	8809	8881	8952	
66	9024	9096	9167	9239	9310	9382	9454	9525	9597	9668	
67	9740	9812	9883	9955	$\bar{0}026$	$\bar{0}098$	$\bar{0}169$	$\bar{0}241$	$\bar{0}313$	$\bar{0}384$	
68	783 0456	0527	0599	0670	0742	0814	0885	0957	1028	1100	
69	1171	1243	1314	1386	1458	1529	1601	1672	1744	1815	
6070	783 1887	1958	2030	2102	2173	2245	2316	2388	2459	2531	
71	2602	2674	2745	2817	2888	2960	3032	3103	3175	3246	
72	3318	3389	3461	3532	3604	3675	3747	3818	3890	3961	
73	4033	4104	4176	4247	4319	4390	4462	4533	4605	4676	
74	4748	4819	4891	4962	5034	5105	5177	5248	5320	5391	
75	5463	5534	5606	5677	5749	5820	5892	5963	6035	6106	
76	6178	6249	6321	6392	6464	6535	6606	6678	6749	6821	
77	6892	6964	7035	7107	7178	7250	7321	7393	7464	7536	
78	7607	7678	7750	7821	7893	7964	8036	8107	8179	8250	
79	8321	8393	8464	8536	8607	8679	8750	8821	8893	8964	
6080	783 9036	9107	9179	9250	9322	9393	9464	9536	9607	9679	
81	9750	9821	9893	9964	$\bar{0}036$	$\bar{0}107$	$\bar{0}179$	$\bar{0}250$	$\bar{0}321$	$\bar{0}393$	71 1 7.1 2 14.2 3 21.3 4 28.4 5 35.5 6 42.6 7 49.7 8 56.8 9 63.9
82	784 0464	0536	0607	0678	0750	0821	0893	0964	1035	1107	
83	1178	1250	1321	1392	1464	1535	1607	1678	1749	1821	
84	1892	1963	2035	2106	2178	2249	2320	2392	2463	2534	
85	2606	2677	2749	2820	2891	2963	3034	3105	3177	3248	
86	3319	3391	3462	3534	3605	3676	3748	3819	3890	3962	
87	4033	4104	4176	4247	4318	4390	4461	4532	4604	4675	
88	4746	4818	4889	4960	5032	5103	5174	5246	5317	5388	
89	5460	5531	5602	5674	5745	5816	5888	5959	6030	6102	
6090	784 6173	6244	6316	6387	6458	6529	6601	6672	6743	6815	
91	6886	6957	7029	7100	7171	7242	7314	7385	7456	7528	
92	7599	7670	7742	7813	7884	7955	8027	8098	8169	8241	
93	8312	8383	8454	8526	8597	8668	8739	8811	8882	8953	
94	9024	9096	9167	9238	9310	9381	9452	9523	9595	9666	
95	9737	9808	9880	9951	$\bar{0}022$	$\bar{0}093$	$\bar{0}165$	$\bar{0}236$	$\bar{0}307$	$\bar{0}378$	
96	785 0450	0521	0592	0663	0735	0806	0877	0948	1019	1091	
97	1162	1233	1304	1376	1447	1518	1589	1661	1732	1803	
98	1874	1945	2017	2088	2159	2230	2301	2373	2444	2515	
99	2586	2658	2729	2800	2871	2942	3014	3085	3156	3227	
6100	785 3298	3370	3441	3512	3583	3654	3726	3797	3868	3939	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

60500″ = 16° 48′ 20″ 6050″ = 1° 40′ 50″ S. 4.685 5126 T. 6994
60600 = 16 50 0 6060 = 1 41 0 5124 6998
60700 = 16 51 40 6070 = 1 41 10 5122 7003
60800 = 16 53 20 6080 = 1 41 20 5120 7007
60900 = 16 55 0 6090 = 1 41 30 5118 7011

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6100	785 3298	3370	3441	3512	3583	3654	3726	3797	3868	3939	
01	4010	4081	4153	4224	4295	4366	4437	4509	4580	4651	
02	4722	4793	4864	4936	5007	5078	5149	5220	5291	5363	
03	5434	5505	5576	5647	5718	5789	5861	5932	6003	6074	
04	6145	6216	6288	6359	6430	6501	6572	6643	6714	6786	
05	6857	6928	6999	7070	7141	7212	7283	7355	7426	7497	
06	7568	7639	7710	7781	7852	7924	7995	8066	8137	8208	
07	8279	8350	8421	8493	8564	8635	8706	8777	8848	8919	
08	8990	9061	9132	9204	9275	9346	9417	9488	9559	9630	
09	9701	9772	9843	9915	9986	0̄057	0̄128	0̄199	0̄270	0̄341	
6110	786 0412	0483	0554	0625	0696	0767	0839	0910	0981	1052	
11	1123	1194	1265	1336	1407	1478	1549	1620	1691	1762	72
12	1833	1905	1976	2047	2118	2189	2260	2331	2402	2473	1 7.2
13	2544	2615	2686	2757	2828	2899	2970	3041	3112	3183	2 14.4
14	3254	3325	3396	3467	3538	3609	3681	3752	3823	3894	3 21.6
15	3965	4036	4107	4178	4249	4320	4391	4462	4533	4604	4 28.8
16	4675	4746	4817	4888	4959	5030	5101	5172	5243	5314	5 36.0 6 43.2
17	5385	5456	5527	5598	5669	5740	5811	5882	5953	6024	7 50.4
18	6095	6166	6237	6308	6379	6450	6521	6592	6663	6734	8 57.6
19	6805	6876	6946	7017	7088	7159	7230	7301	7372	7443	9 64.8
6120	786 7514	7585	7656	7727	7798	7869	7940	8011	8082	8153	
21	8224	8295	8366	8437	8508	8579	8649	8720	8791	8862	
22	8933	9004	9075	9146	9217	9288	9359	9430	9501	9572	
23	9643	9714	9784	9855	9926	9997	0̄068	0̄139	0̄210	0̄281	
24	787 0352	0423	0494	0565	0635	0706	0777	0848	0919	0990	
25	1061	1132	1203	1274	1345	1415	1486	1557	1628	1699	
26	1770	1841	1912	1983	2053	2124	2195	2266	2337	2408	
27	2479	2550	2621	2691	2762	2833	2904	2975	3046	3117	
28	3188	3258	3329	3400	3471	3542	3613	3684	3754	3825	
29	3896	3967	4038	4109	4180	4250	4321	4392	4463	4534	
6130	787 4605	4676	4746	4817	4888	4959	5030	5101	5171	5242	
31	5313	5384	5455	5526	5596	5667	5738	5809	5880	5951	71
32	6021	6092	6163	6234	6305	6376	6446	6517	6588	6659	1 7.1
33	6730	6800	6871	6942	7013	7084	7155	7225	7296	7367	2 14.2
34	7438	7509	7579	7650	7721	7792	7863	7933	8004	8075	3 21.3
35	8146	8216	8287	8358	8429	8500	8570	8641	8712	8783	4 28.4
36	8854	8924	8995	9066	9137	9207	9278	9349	9420	9490	5 35.5 6 42.6
37	9561	9632	9703	9774	9844	9915	9986	0̄057	0̄127	0̄198	7 49.7
38	788 0269	0340	0410	0481	0552	0623	0693	0764	0835	0906	8 56.8
39	0976	1047	1118	1189	1259	1330	1401	1472	1542	1613	9 63.9
6140	788 1684	1754	1825	1896	1967	2037	2108	2179	2250	2320	
41	2391	2462	2532	2603	2674	2745	2815	2886	2957	3027	
42	3098	3169	3240	3310	3381	3452	3522	3593	3664	3734	
43	3805	3876	3947	4017	4088	4159	4229	4300	4371	4441	
44	4512	4583	4653	4724	4795	4865	4936	5007	5078	5148	
45	5219	5290	5360	5431	5502	5572	5643	5714	5784	5855	
46	5926	5996	6067	6138	6208	6279	6350	6420	6491	6561	
47	6632	6703	6773	6844	6915	6985	7056	7127	7197	7268	
48	7339	7409	7480	7551	7621	7692	7762	7833	7904	7974	
49	8045	8116	8186	8257	8327	8398	8469	8539	8610	8681	
6150	788 8751	8822	8892	8963	9034	9104	9175	9245	9316	9387	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

61000″ = 16° 56′ 40″	6100″ = 1° 41′ 40″	S. 4.685 5116	T. 7015
61100 = 16 58 20	6110 = 1 41 50	5114	7019
61200 = 17 0 0	6120 = 1 42 0	5111	7023
61300 = 17 1 40	6130 = 1 42 10	5109	7028
61400 = 17 3 20	6140 = 1 42 20	5107	7032

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6150	788 8751	8822	8892	8963	9034	9104	9175	9245	9316	9387	
51	9457	9528	9598	9669	9740	9810	9881	9951	0̄022	0̄093	
52	789 0163	0234	0304	0375	0446	0516	0587	0657	0728	0799	
53	0869	0940	1010	1081	1151	1222	1293	1363	1434	1504	
54	1575	1645	1716	1787	1857	1928	1998	2069	2139	2210	
55	2281	2351	2422	2492	2563	2633	2704	2774	2845	2916	
56	2986	3057	3127	3198	3268	3339	3409	3480	3550	3621	
57	3692	3762	3833	3903	3974	4044	4115	4185	4256	4326	
58	4397	4467	4538	4608	4679	4749	4820	4890	4961	5032	
59	5102	5173	5243	5314	5384	5455	5525	5596	5666	5737	
6160	789 5807	5878	5948	6019	6089	6160	6230	6301	6371	6442	
61	6512	6583	6653	6724	6794	6865	6935	7005	7076	7146	71
62	7217	7287	7358	7428	7499	7569	7640	7710	7781	7851	1 7.1
63	7922	7992	8063	8133	8204	8274	8344	8415	8485	8556	2 14.2
64	8626	8697	8767	8838	8908	8979	9049	9119	9190	9260	3 21.3
65	9331	9401	9472	9542	9613	9683	9753	9824	9894	9965	4 28.4
66	790 0035	0106	0176	0247	0317	0387	0458	0528	0599	0669	5 35.5 6 42.6
67	0739	0810	0880	0951	1021	1092	1162	1232	1303	1373	7 49.7
68	1444	1514	1584	1655	1725	1796	1866	1936	2007	2077	8 56.8
69	2148	2218	2288	2359	2429	2500	2570	2640	2711	2781	9 63.9
6170	790 2852	2922	2992	3063	3133	3204	3274	3344	3415	3485	
71	3555	3626	3696	3767	3837	3907	3978	4048	4118	4189	
72	4259	4330	4400	4470	4541	4611	4681	4752	4822	4892	
73	4963	5033	5103	5174	5244	5315	5385	5455	5526	5596	
74	5666	5737	5807	5877	5948	6018	6088	6159	6229	6299	
75	6370	6440	6510	6581	6651	6721	6792	6862	6932	7003	
76	7073	7143	7214	7284	7354	7424	7495	7565	7635	7706	
77	7776	7846	7917	7987	8057	8128	8198	8268	8338	8409	
78	8479	8549	8620	8690	8760	8831	8901	8971	9041	9112	
79	9182	9252	9323	9393	9463	9533	9604	9674	9744	9814	
6180	790 9885	9955	0̄025	0̄096	0̄166	0̄236	0̄306	0̄377	0̄447	0̄517	
81	791 0587	0658	0728	0798	0868	0939	1009	1079	1150	1220	70
82	1290	1360	1431	1501	1571	1641	1711	1782	1852	1922	1 7.0
83	1992	2063	2133	2203	2273	2344	2414	2484	2554	2625	2 14.0
84	2695	2765	2835	2905	2976	3046	3116	3186	3257	3327	3 21.0
85	3397	3467	3537	3608	3678	3748	3818	3889	3959	4029	4 28.0
86	4099	4169	4240	4310	4380	4450	4520	4591	4661	4731	5 35.0 6 42.0
87	4801	4871	4942	5012	5082	5152	5222	5292	5363	5433	7 49.0
88	5503	5573	5643	5714	5784	5854	5924	5994	6064	6135	8 56.0
89	6205	6275	6345	6415	6486	6556	6626	6696	6766	6836	9 63.0
6190	791 6906	6977	7047	7117	7187	7257	7327	7398	7468	7538	
91	7608	7678	7748	7818	7889	7959	8029	8099	8169	8239	
92	8309	8380	8450	8520	8590	8660	8730	8800	8871	8941	
93	9011	9081	9151	9221	9291	9361	9432	9502	9572	9642	
94	9712	9782	9852	9922	9992	0̄063	0̄133	0̄203	0̄273	0̄343	
95	792 0413	0483	0553	0623	0694	0764	0834	0904	0974	1044	
96	1114	1184	1254	1324	1394	1465	1535	1605	1675	1745	
97	1815	1885	1955	2025	2095	2165	2235	2306	2376	2446	
98	2516	2586	2656	2726	2796	2866	2936	3006	3076	3146	
99	3216	3286	3356	3427	3497	3567	3637	3707	3777	3847	
6200	792 3917	3987	4057	4127	4197	4267	4337	4407	4477	4547	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

61500″ = 17° 5′ 0″ 6150″ = 1°42′30″ S. 4.685 5105 T. 7036
61600 = 17 6 40 6160 = 1 42 40 5103 7040
61700 = 17 8 20 6170 = 1 42 50 5101 7044
61800 = 17 10 0 6180 = 1 43 0 5099 7048
61900 = 17 11 40 6190 = 1 43 10 5097 7053

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6200	792 3917	3987	4057	4127	4197	4267	4337	4407	4477	4547	
01	4617	4687	4757	4827	4897	4967	5038	5108	5178	5248	
02	5318	5388	5458	5528	5598	5668	5738	5808	5878	5948	
03	6018	6088	6158	6228	6298	6368	6438	6508	6578	6648	
04	6718	6788	6858	6928	6998	7068	7138	7208	7278	7348	
05	7418	7488	7558	7628	7698	7768	7838	7908	7978	8048	
06	8118	8188	8258	8328	8398	8468	8538	8608	8678	8747	
07	8817	8887	8957	9027	9097	9167	9237	9307	9377	9447	
08	9517	9587	9657	9727	9797	9867	9937	0̄007	0̄077	0̄147	
09	793 0217	0287	0356	0426	0496	0566	0636	0706	0776	0846	
6210	793 0916	0986	1056	1126	1196	1266	1336	1406	1475	1545	
11	1615	1685	1755	1825	1895	1965	2035	2105	2175	2245	71
12	2314	2384	2454	2524	2594	2664	2734	2804	2874	2944	1 7.1
13	3014	3083	3153	3223	3293	3363	3433	3503	3573	3643	2 14.2
14	3712	3782	3852	3922	3992	4062	4132	4202	4272	4341	3 21.3
15	4411	4481	4551	4621	4691	4761	4831	4900	4970	5040	4 28.4
16	5110	5180	5250	5320	5390	5459	5529	5599	5669	5739	5 35.5 6 42.6
17	5809	5879	5948	6018	6088	6158	6228	6298	6367	6437	7 49.7
18	6507	6577	6647	6717	6787	6856	6926	6996	7066	7136	8 56.8
19	7206	7275	7345	7415	7485	7555	7625	7694	7764	7834	9 63.9
6220	793 7904	7974	8043	8113	8183	8253	8323	8393	8462	8532	
21	8602	8672	8742	8811	8881	8951	9021	9091	9160	9230	
22	9300	9370	9440	9509	9579	9649	9719	9789	9858	9928	
23	9998	0̄068	0̄138	0̄207	0̄277	0̄347	0̄417	0̄487	0̄556	0̄626	
24	794 0696	0766	0835	0905	0975	1045	1114	1184	1254	1324	
25	1394	1463	1533	1603	1673	1742	1812	1882	1952	2021	
26	2091	2161	2231	2300	2370	2440	2510	2579	2649	2719	
27	2789	2858	2928	2998	3068	3137	3207	3277	3347	3416	
28	3486	3556	3626	3695	3765	3835	3904	3974	4044	4114	
29	4183	4253	4323	4392	4462	4532	4602	4671	4741	4811	
6230	794 4880	4950	5020	5090	5159	5229	5299	5368	5438	5508	
31	5578	5647	5717	5787	5856	5926	5996	6065	6135	6205	70
32	6274	6344	6414	6484	6553	6623	6693	6762	6832	6902	1 7.0
33	6971	7041	7111	7180	7250	7320	7389	7459	7529	7598	2 14.0
34	7668	7738	7807	7877	7947	8016	8086	8156	8225	8295	3 21.0
35	8365	8434	8504	8574	8643	8713	8782	8852	8922	8991	4 28.0
36	9061	9131	9200	9270	9340	9409	9479	9549	9618	9688	5 35.0 6 42.0
37	9757	9827	9897	9966	0̄036	0̄106	0̄175	0̄245	0̄314	0̄384	7 49.0
38	795 0454	0523	0593	0663	0732	0802	0871	0941	1011	1080	8 56.0
39	1150	1219	1289	1359	1428	1498	1567	1637	1707	1776	9 63.0
6240	795 1846	1915	1985	2055	2124	2194	2263	2333	2403	2472	
41	2542	2611	2681	2751	2820	2890	2959	3029	3098	3168	
42	3238	3307	3377	3446	3516	3586	3655	3725	3794	3864	
43	3933	4003	4072	4142	4212	4281	4351	4420	4490	4559	
44	4629	4698	4768	4838	4907	4977	5046	5116	5185	5255	
45	5324	5394	5464	5533	5603	5672	5742	5811	5881	5950	
46	6020	6089	6159	6228	6298	6367	6437	6506	6576	6646	
47	6715	6785	6854	6924	6993	7063	7132	7202	7271	7341	
48	7410	7480	7549	7619	7688	7758	7827	7897	7966	8036	
49	8105	8175	8244	8314	8383	8453	8522	8592	8661	8731	
6250	795 8800	8870	8939	9009	9078	9148	9217	9287	9356	9426	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

62000″ = 17° 13′ 20″ 6200″ = 1° 43′ 20″ S. 4.685 5095 T. 7057
62100 = 17 15 0 6210 = 1 43 30 5093 7061
62200 = 17 16 40 6220 = 1 43 40 5090 7065
62300 = 17 18 20 6230 = 1 43 50 5088 7070
62400 = 17 20 0 6240 = 1 44 0 5086 7074

N.	0	1	2	3	4	5	6	7	8	9	P. P.
250	795 8800	8870	8939	9009	9078	9148	9217	9287	9356	9426	
51	9495	9564	9634	9703	9773	9842	9912	9981	0̄051	0̄120	
52	796 0190	0259	0329	0398	0468	0537	0606	0676	0745	0815	
53	0884	0954	1023	1093	1162	1232	1301	1370	1440	1509	
54	1579	1648	1718	1787	1857	1926	1995	2065	2134	2204	
55	2273	2343	2412	2481	2551	2620	2690	2759	2829	2898	
56	2967	3037	3106	3176	3245	3314	3384	3453	3523	3592	70
57	3662	3731	3800	3870	3939	4009	4078	4147	4217	4286	1 7.0
58	4356	4425	4494	4564	4633	4703	4772	4841	4911	4980	2 14.0
59	5050	5119	5188	5258	5327	5396	5466	5535	5605	5674	3 21.0
260	796 5743	5813	5882	5951	6021	6090	6160	6229	6298	6368	4 28.0
61	6437	6506	6576	6645	6714	6784	6853	6923	6992	7061	5 35.0 6 42.0
62	7131	7200	7269	7339	7408	7477	7547	7616	7685	7755	7 49.0
63	7824	7893	7963	8032	8101	8171	8240	8309	8379	8448	8 56.0
64	8517	8587	8656	8725	8795	8864	8933	9003	9072	9141	9 63.0
65	9211	9280	9349	9419	9488	9557	9627	9696	9765	9835	
66	9904	9973	0̄043	0̄112	0̄181	0̄250	0̄320	0̄389	0̄458	0̄528	
67	797 0597	0666	0736	0805	0874	0943	1013	1082	1151	1221	
68	1290	1359	1428	1498	1567	1636	1706	1775	1844	1913	
69	1983	2052	2121	2191	2260	2329	2398	2468	2537	2606	
6270	797 2675	2745	2814	2883	2952	3022	3091	3160	3229	3299	
71	3368	3437	3507	3576	3645	3714	3784	3853	3922	3991	69
72	4060	4130	4199	4268	4337	4407	4476	4545	4614	4684	1 6.9
73	4753	4822	4891	4961	5030	5099	5168	5237	5307	5376	2 13.8
74	5445	5514	5584	5653	5722	5791	5860	5930	5999	6068	3 20.7
75	6137	6207	6276	6345	6414	6483	6553	6622	6691	6760	4 27.6
76	6829	6899	6968	7037	7106	7175	7245	7314	7383	7452	5 34.5 6 41.4
77	7521	7590	7660	7729	7798	7867	7936	8006	8075	8144	7 48.3
78	8213	8282	8351	8421	8490	8559	8628	8697	8766	8836	8 55.2
79	8905	8974	9043	9112	9181	9251	9320	9389	9458	9527	9 62.1
6280	797 9596	9666	9735	9804	9873	9942	0̄011	0̄080	0̄150	0̄219	
81	798 0288	0357	0426	0495	0565	0634	0703	0772	0841	0910	
82	0979	1048	1118	1187	1256	1325	1394	1463	1532	1601	
83	1671	1740	1809	1878	1947	2016	2085	2154	2224	2293	
84	2362	2431	2500	2569	2638	2707	2776	2846	2915	2984	
85	3053	3122	3191	3260	3329	3398	3467	3536	3606	3675	
86	3744	3813	3882	3951	4020	4089	4158	4227	4296	4366	68
87	4435	4504	4573	4642	4711	4780	4849	4918	4987	5056	1 6.8
88	5125	5194	5263	5333	5402	5471	5540	5609	5678	5747	2 13.6
89	5816	5885	5954	6023	6092	6161	6230	6299	6368	6437	3 20.4
6290	798 6506	6575	6645	6714	6783	6852	6921	6990	7059	7128	4 27.2
91	7197	7266	7335	7404	7473	7542	7611	7680	7749	7818	5 34.0 6 40.8
92	7887	7956	8025	8094	8163	8232	8301	8370	8439	8508	7 47.6
93	8577	8646	8715	8784	8853	8922	8991	9060	9129	9198	8 54.4
94	9267	9336	9405	9474	9543	9612	9681	9750	9819	9888	9 61.2
95	9957	0̄026	0̄095	0̄164	0̄233	0̄302	0̄371	0̄440	0̄509	0̄578	
96	799 0647	0716	0785	0854	0923	0992	1061	1130	1199	1268	
97	1337	1406	1475	1544	1613	1682	1751	1820	1889	1958	
98	2027	2096	2164	2233	2302	2371	2440	2509	2578	2647	
99	2716	2785	2854	2923	2992	3061	3130	3199	3268	3337	
6300	799 3405	3474	3543	3612	3681	3750	3819	3888	3957	4026	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

62500″ = 17° 21′ 40″ 6250″ = 1° 44′ 10″ S. 4.685 5084 T. 7078
62600 = 17 23 20 6260 = 1 44 20 5082 7082
62700 = 17 25 0 6270 = 1 44 30 5080 7087
62800 = 17 26 40 6280 = 1 44 40 5078 7091
62900 = 17 28 20 6290 = 1 44 50 5076 7095

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6300	799 3405	3474	3543	3612	3681	3750	3819	3888	3957	4026	
01	4095	4164	4233	4302	4370	4439	4508	4577	4646	4715	
02	4784	4853	4922	4991	5060	5129	5197	5266	5335	5404	
03	5473	5542	5611	5680	5749	5818	5886	5955	6024	6093	
04	6162	6231	6300	6369	6438	6506	6575	6644	6713	6782	
05	6851	6920	6989	7058	7126	7195	7264	7333	7402	7471	
06	7540	7609	7677	7746	7815	7884	7953	8022	8091	8159	
07	8228	8297	8366	8435	8504	8573	8641	8710	8779	8848	
08	8917	8986	9055	9123	9192	9261	9330	9399	9468	9536	
09	9605	9674	9743	9812	9881	9949	0̄018	0̄087	0̄156	0̄225	
6310	800 0294	0362	0431	0500	0569	0638	0707	0775	0844	0913	
11	0982	1051	1119	1188	1257	1326	1395	1463	1532	1601	69 1 6.9 2 13.8 3 20.7 4 27.6 5 34.5 6 41.4 7 48.3 8 55.2 9 62.1
12	1670	1739	1808	1876	1945	2014	2083	2152	2220	2289	
13	2358	2427	2495	2564	2633	2702	2771	2839	2908	2977	
14	3046	3115	3183	3252	3321	3390	3458	3527	3596	3665	
15	3734	3802	3871	3940	4009	4077	4146	4215	4284	4352	
16	4421	4490	4559	4627	4696	4765	4834	4903	4971	5040	
17	5109	5178	5246	5315	5384	5453	5521	5590	5659	5727	
18	5796	5865	5934	6002	6071	6140	6209	6277	6346	6415	
19	6484	6552	6621	6690	6758	6827	6896	6965	7033	7102	
6320	800 7171	7239	7308	7377	7446	7514	7583	7652	7720	7789	
21	7858	7927	7995	8064	8133	8201	8270	8339	8408	8476	
22	8545	8614	8682	8751	8820	8888	8957	9026	9094	9163	
23	9232	9301	9369	9438	9507	9575	9644	9713	9781	9850	
24	9919	9987	0̄056	0̄125	0̄193	0̄262	0̄331	0̄399	0̄468	0̄537	
25	801 0605	0674	0743	0811	0880	0949	1017	1086	1155	1223	
26	1292	1361	1429	1498	1566	1635	1704	1772	1841	1910	
27	1978	2047	2116	2184	2253	2322	2390	2459	2527	2596	
28	2665	2733	2802	2871	2939	3008	3076	3145	3214	3282	
29	3351	3420	3488	3557	3625	3694	3763	3831	3900	3968	
6330	801 4037	4106	4174	4243	4312	4380	4449	4517	4586	4655	
31	4723	4792	4860	4929	4998	5066	5135	5203	5272	5340	68 1 6.8 2 13.6 3 20.4 4 27.2 5 34.0 6 40.8 7 47.6 8 54.4 9 61.2
32	5409	5478	5546	5615	5683	5752	5821	5889	5958	6026	
33	6095	6163	6232	6301	6369	6438	6506	6575	6643	6712	
34	6781	6849	6918	6986	7055	7123	7192	7261	7329	7398	
35	7466	7535	7603	7672	7740	7809	7878	7946	8015	8083	
36	8152	8220	8289	8357	8426	8494	8563	8631	8700	8769	
37	8837	8906	8974	9043	9111	9180	9248	9317	9385	9454	
38	9522	9591	9659	9728	9796	9865	9933	0̄002	0̄070	0̄139	
39	802 0208	0276	0345	0413	0482	0550	0619	0687	0756	0824	
6340	802 0893	0961	1030	1098	1167	1235	1304	1372	1441	1509	
41	1578	1646	1715	1783	1851	1920	1988	2057	2125	2194	
42	2262	2331	2399	2468	2536	2605	2673	2742	2810	2879	
43	2947	3016	3084	3153	3221	3289	3358	3426	3495	3563	
44	3632	3700	3769	3837	3906	3974	4042	4111	4179	4248	
45	4316	4385	4453	4522	4590	4658	4727	4795	4864	4932	
46	5001	5069	5138	5206	5274	5343	5411	5480	5548	5617	
47	5685	5753	5822	5890	5959	6027	6096	6164	6232	6301	
48	6369	6438	6506	6574	6643	6711	6780	6848	6916	6985	
49	7053	7122	7190	7258	7327	7395	7464	7532	7600	7669	
6350	802 7737	7806	7874	7942	8011	8079	8148	8216	8284	8353	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

63000″ = 17°30′ 0″ 6300″ = 1°45′ 0″ S. 4.685 5073 T. 7099
63100 = 17 31 40 6310 = 1 45 10 5071 7104
63200 = 17 33 20 6320 = 1 45 20 5069 7108
63300 = 17 35 0 6330 = 1 45 30 5067 7112
63400 = 17 36 40 6340 = 1 45 40 5065 7117

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6350	802 7737	7806	7874	7942	8011	8079	8148	8216	8284	8353	
51	8421	8490	8558	8626	8695	8763	8831	8900	8968	9037	
52	9105	9173	9242	9310	9378	9447	9515	9583	9652	9720	
53	9789	9857	9925	9994	$\bar{0}062$	$\bar{0}130$	$\bar{0}199$	$\bar{0}267$	$\bar{0}335$	$\bar{0}404$	
54	803 0472	0540	0609	0677	0745	0814	0882	0951	1019	1087	
55	1156	1224	1292	1361	1429	1497	1566	1634	1702	1771	
56	1839	1907	1976	2044	2112	2181	2249	2317	2385	2454	
57	2522	2590	2659	2727	2795	2864	2932	3000	3069	3137	
58	3205	3274	3342	3410	3478	3547	3615	3683	3752	3820	
59	3888	3957	4025	4093	4161	4230	4298	4366	4435	4503	
6360	803 4571	4639	4708	4776	4844	4913	4981	5049	5117	5186	
61	5254	5322	5391	5459	5527	5595	5664	5732	5800	5868	68
62	5937	6005	6073	6141	6210	6278	6346	6414	6483	6551	1 6.8
63	6619	6687	6756	6824	6892	6960	7029	7097	7165	7233	2 13.6
64	7302	7370	7438	7506	7575	7643	7711	7779	7848	7916	3 20.4
65	7984	8052	8121	8189	8257	8325	8393	8462	8530	8598	4 27.2
66	8666	8735	8803	8871	8939	9007	9076	9144	9212	9280	5 34.0 6 40.8
67	9348	9417	9485	9553	9621	9690	9758	9826	9894	9962	7 47.6
68	804 0031	0099	0167	0235	0303	0372	0440	0508	0576	0644	8 54.4
69	0712	0781	0849	0917	0985	1053	1122	1190	1258	1326	9 61.2
6370	804 1394	1463	1531	1599	1667	1735	1803	1872	1940	2008	
71	2076	2144	2212	2281	2349	2417	2485	2553	2621	2690	
72	2758	2826	2894	2962	3030	3098	3167	3235	3303	3371	
73	3439	3507	3575	3644	3712	3780	3848	3916	3984	4052	
74	4121	4189	4257	4325	4393	4461	4529	4598	4666	4734	
75	4802	4870	4938	5006	5074	5143	5211	5279	5347	5415	
76	5483	5551	5619	5687	5756	5824	5892	5960	6028	6096	
77	6164	6232	6300	6368	6437	6505	6573	6641	6709	6777	
78	6845	6913	6981	7049	7118	7186	7254	7322	7390	7458	
79	7526	7594	7662	7730	7798	7866	7934	8003	8071	8139	
6380	804 8207	8275	8343	8411	8479	8547	8615	8683	8751	8819	
81	8887	8956	9024	9092	9160	9228	9296	9364	9432	9500	67
82	9568	9636	9704	9772	9840	9908	9976	$\bar{0}044$	$\bar{0}112$	$\bar{0}180$	1 6.7
83	805 0248	0316	0385	0453	0521	0589	0657	0725	0793	0861	2 13.4
84	0929	0997	1065	1133	1201	1269	1337	1405	1473	1541	3 20.1
85	1609	1677	1745	1813	1881	1949	2017	2085	2153	2221	4 26.8
86	2289	2357	2425	2493	2561	2629	2697	2765	2833	2901	5 33.5 6 40.2
87	2969	3037	3105	3173	3241	3309	3377	3445	3513	3581	7 46.9
88	3649	3717	3785	3853	3921	3989	4057	4125	4193	4261	8 53.6
89	4329	4397	4465	4533	4601	4669	4737	4805	4873	4941	9 60.3
6390	805 5009	5077	5145	5212	5280	5348	5416	5484	5552	5620	
91	5688	5756	5824	5892	5960	6028	6096	6164	6232	6300	
92	6368	6436	6504	6571	6639	6707	6775	6843	6911	6979	
93	7047	7115	7183	7251	7319	7387	7455	7523	7590	7658	
94	7726	7794	7862	7930	7998	8066	8134	8202	8270	8338	
95	8405	8473	8541	8609	8677	8745	8813	8881	8949	9017	
96	9085	9152	9220	9288	9356	9424	9492	9560	9628	9696	
97	9764	9831	9899	9967	$\bar{0}035$	$\bar{0}103$	$\bar{0}171$	$\bar{0}239$	$\bar{0}307$	$\bar{0}374$	
98	806 0442	0510	0578	0646	0714	0782	0850	0917	0985	1053	
99	1121	1189	1257	1325	1393	1460	1528	1596	1664	1732	
6400	806 1800	1868	1935	2003	2071	2139	2207	2275	2343	2410	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

63500″ = 17° 38′ 20″ 6350″ = 1° 45′ 50″ S. 4.685 5063 T. 7121
63600 = 17 40 0 6360 = 1 46 0 5060 7125
63700 = 17 41 40 6370 = 1 46 10 5058 7130
63800 = 17 43 20 6380 = 1 46 20 5056 7134
63900 = 17 45 0 6390 = 1 46 30 5054 7138

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6400	806 1800	1868	1935	2003	2071	2139	2207	2275	2343	2410	
01	2478	2546	2614	2682	2750	2817	2885	2953	3021	3089	
02	3157	3225	3292	3360	3428	3496	3564	3632	3699	3767	
03	3835	3903	3971	4038	4106	4174	4242	4310	4378	4445	
04	4513	4581	4649	4717	4784	4852	4920	4988	5056	5124	
05	5191	5259	5327	5395	5463	5530	5598	5666	5734	5802	
06	5869	5937	6005	6073	6141	6208	6276	6344	6412	6479	
07	6547	6615	6683	6751	6818	6886	6954	7022	7089	7157	
08	7225	7293	7361	7428	7496	7564	7632	7699	7767	7835	
09	7903	7970	8038	8106	8174	8242	8309	8377	8445	8513	
6410	806 8580	8648	8716	8784	8851	8919	8987	9055	9122	9190	
11	9258	9326	9393	9461	9529	9596	9664	9732	9800	9867	68 1 6.8 2 13.6 3 20.4 4 27.2 5 34.0 6 40.8 7 47.6 8 54.4 9 61.2
12	9935	$\bar{0}003$	$\bar{0}071$	$\bar{0}138$	$\bar{0}206$	$\bar{0}274$	$\bar{0}342$	$\bar{0}409$	$\bar{0}477$	$\bar{0}545$	
13	807 0612	0680	0748	0816	0883	0951	1019	1086	1154	1222	
14	1290	1357	1425	1493	1560	1628	1696	1764	1831	1899	
15	1967	2034	2102	2170	2237	2305	2373	2440	2508	2576	
16	2644	2711	2779	2847	2914	2982	3050	3117	3185	3253	
17	3320	3388	3456	3523	3591	3659	3726	3794	3862	3929	
18	3997	4065	4132	4200	4268	4335	4403	4471	4538	4606	
19	4674	4741	4809	4877	4944	5012	5080	5147	5215	5283	
6420	807 5350	5418	5486	5553	5621	5689	5756	5824	5891	5959	
21	6027	6094	6162	6230	6297	6365	6432	6500	6568	6635	
22	6703	6771	6838	6906	6974	7041	7109	7176	7244	7312	
23	7379	7447	7514	7582	7650	7717	7785	7853	7920	7988	
24	8055	8123	8191	8258	8326	8393	8461	8529	8596	8664	
25	8731	8799	8867	8934	9002	9069	9137	9204	9272	9340	
26	9407	9475	9542	9610	9678	9745	9813	9880	9948	$\bar{0}015$	
27	808 0083	0151	0218	0286	0353	0421	0488	0556	0624	0691	
28	0759	0826	0894	0961	1029	1096	1164	1232	1299	1367	
29	1434	1502	1569	1637	1704	1772	1840	1907	1975	2042	
6430	808 2110	2177	2245	2312	2380	2447	2515	2582	2650	2718	
31	2785	2853	2920	2988	3055	3123	3190	3258	3325	3393	67 1 6.7 2 13.4 3 20.1 4 26.8 5 33.5 6 40.2 7 46.9 8 53.6 9 60.3
32	3460	3528	3595	3663	3730	3798	3865	3933	4000	4068	
33	4136	4203	4271	4338	4406	4473	4541	4608	4676	4743	
34	4811	4878	4946	5013	5081	5148	5216	5283	5351	5418	
35	5486	5553	5620	5688	5755	5823	5890	5958	6025	6093	
36	6160	6228	6295	6363	6430	6498	6565	6633	6700	6768	
37	6835	6903	6970	7037	7105	7172	7240	7307	7375	7442	
38	7510	7577	7645	7712	7780	7847	7914	7982	8049	8117	
39	8184	8252	8319	8387	8454	8521	8589	8656	8724	8791	
6440	808 8859	8926	8994	9061	9128	9196	9263	9331	9398	9466	
41	9533	9600	9668	9735	9803	9870	9938	$\bar{0}005$	$\bar{0}072$	$\bar{0}140$	
42	809 0207	0275	0342	0409	0477	0544	0612	0679	0747	0814	
43	0881	0949	1016	1084	1151	1218	1286	1353	1421	1488	
44	1555	1623	1690	1757	1825	1892	1960	2027	2094	2162	
45	2229	2297	2364	2431	2499	2566	2634	2701	2768	2836	
46	2903	2970	3038	3105	3173	3240	3307	3375	3442	3509	
47	3577	3644	3711	3779	3846	3914	3981	4048	4116	4183	
48	4250	4318	4385	4452	4520	4587	4654	4722	4789	4856	
49	4924	4991	5058	5126	5193	5260	5328	5395	5462	5530	
6450	809 5597	5664	5732	5799	5866	5934	6001	6068	6136	6203	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

64000″ = 17° 46′ 40″	6400″ = 1° 46′ 40″	S. 4.685 5052	T. 7143
64100 = 17 48 20	6410 = 1 46 50	5050	7147
64200 = 17 50 0	6420 = 1 47 0	5047	7151
64300 = 17 51 40	6430 = 1 47 10	5045	7156
64400 = 17 53 20	6440 = 1 47 20	5043	7160

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6450	809 5597	5664	5732	5799	5866	5934	6001	6068	6136	6203	
51	6270	6338	6405	6472	6540	6607	6674	6742	6809	6876	
52	6944	7011	7078	7146	7213	7280	7347	7415	7482	7549	
53	7617	7684	7751	7819	7886	7953	8020	8088	8155	8222	
54	8290	8357	8424	8491	8559	8626	8693	8761	8828	8895	
55	8962	9030	9097	9164	9232	9299	9366	9433	9501	9568	
56	9635	9702	9770	9837	9904	9972	0̄039	0̄106	0̄173	0̄241	
57	810 0308	0375	0442	0510	0577	0644	0711	0779	0846	0913	
58	0980	1048	1115	1182	1249	1317	1384	1451	1518	1586	
59	1653	1720	1787	1855	1922	1989	2056	2123	2191	2258	
6460	810 2325	2392	2460	2527	2594	2661	2729	2796	2863	2930	
61	2997	3065	3132	3199	3266	3333	3401	3468	3535	3602	67
62	3670	3737	3804	3871	3938	4006	4073	4140	4207	4274	1 6.7
63	4342	4409	4476	4543	4610	4678	4745	4812	4879	4946	2 13.4
64	5013	5081	5148	5215	5282	5349	5417	5484	5551	5618	3 20.1
65	5685	5752	5820	5887	5954	6021	6088	6156	6223	6290	4 26.8
66	6357	6424	6491	6558	6626	6693	6760	6827	6894	6961	5 33.5 6 40.2
67	7029	7096	7163	7230	7297	7364	7432	7499	7566	7633	7 46.9
68	7700	7767	7834	7902	7969	8036	8103	8170	8237	8304	8 53.6
69	8372	8439	8506	8573	8640	8707	8774	8841	8909	8976	9 60.3
6470	810 9043	9110	9177	9244	9311	9378	9446	9513	9580	9647	
71	9714	9781	9848	9915	9982	0̄050	0̄117	0̄184	0̄251	0̄318	
72	811 0385	0452	0519	0586	0653	0721	0788	0855	0922	0989	
73	1056	1123	1190	1257	1324	1392	1459	1526	1593	1660	
74	1727	1794	1861	1928	1995	2062	2129	2197	2264	2331	
75	2398	2465	2532	2599	2666	2733	2800	2867	2934	3001	
76	3068	3135	3203	3270	3337	3404	3471	3538	3605	3672	
77	3739	3806	3873	3940	4007	4074	4141	4208	4275	4342	
78	4409	4476	4544	4611	4678	4745	4812	4879	4946	5013	
79	5080	5147	5214	5281	5348	5415	5482	5549	5616	5683	
6480	811 5750	5817	5884	5951	6018	6085	6152	6219	6286	6353	
81	6420	6487	6554	6621	6688	6755	6822	6889	6956	7023	66
82	7090	7157	7224	7291	7358	7425	7492	7559	7626	7693	1 6.6
83	7760	7827	7894	7961	8028	8095	8162	8229	8296	8363	2 13.2
84	8430	8497	8564	8631	8698	8765	8832	8899	8966	9033	3 19.8
85	9100	9167	9234	9301	9368	9435	9502	9569	9636	9702	4 26.4
86	9769	9836	9903	9970	0̄037	0̄104	0̄171	0̄238	0̄305	0̄372	5 33.0 6 39.6
87	812 0439	0506	0573	0640	0707	0774	0841	0908	0975	1041	7 46.2
88	1108	1175	1242	1309	1376	1443	1510	1577	1644	1711	8 52.8
89	1778	1845	1912	1979	2045	2112	2179	2246	2313	2380	9 59.4
6490	812 2447	2514	2581	2648	2715	2782	2848	2915	2982	3049	
91	3116	3183	3250	3317	3384	3451	3518	3584	3651	3718	
92	3785	3852	3919	3986	4053	4120	4186	4253	4320	4387	
93	4454	4521	4588	4655	4722	4788	4855	4922	4989	5056	
94	5123	5190	5257	5323	5390	5457	5524	5591	5658	5725	
95	5792	5858	5925	5992	6059	6126	6193	6260	6326	6393	
96	6460	6527	6594	6661	6728	6794	6861	6928	6995	7062	
97	7129	7196	7262	7329	7396	7463	7530	7597	7663	7730	
98	7797	7864	7931	7998	8064	8131	8198	8265	8332	8399	
99	8465	8532	8599	8666	8733	8799	8866	8933	9000	9067	
6500	812 9134	9200	9267	9334	9401	9468	9534	9601	9668	9735	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

64500″ = 17° 55′ 0″ 6450″ = 1° 47′ 30″ S. 4.685 5041 T. 7165
64600 = 17 56 40 6460 = 1 47 40 5039 7169
64700 = 17 58 20 6470 = 1 47 50 5036 7173
64800 = 18 0 0 6480 = 1 48 0 5034 7178
64900 = 18 1 40 6490 = 1 48 10 5032 7182

N	0	1	2	3	4	5	6	7	8	9
6500	812 9134	9200	9267	9334	9401	9468	9534	9601	9668	9735
01	9802	9868	9935	0̄002	0̄069	0̄136	0̄202	0̄269	0̄336	0̄403
02	813 0470	0536	0603	0670	0737	0804	0870	0937	1004	1071
03	1138	1204	1271	1338	1405	1471	1538	1605	1672	1739
04	1805	1872	1939	2006	2072	2139	2206	2273	2339	2406
05	2473	2540	2607	2673	2740	2807	2874	2940	3007	3074
06	3141	3207	3274	3341	3408	3474	3541	3608	3675	3741
07	3808	3875	3942	4008	4075	4142	4209	4275	4342	4409
08	4475	4542	4609	4676	4742	4809	4876	4943	5009	5076
09	5143	5209	5276	5343	5410	5476	5543	5610	5676	5743
6510	813 5810	5877	5943	6010	6077	6143	6210	6277	6344	6410
11	[illegible]	[illegible]	6610	[illegible]	6744	6810	6877	6944	7011	7077
12	7144	[illegible]	[illegible]	7344	7411	[illegible]	7544	7611	7677	7744
13	7811	[illegible]	[illegible]	8011	[illegible]	8144	8211	8278	8344	8411
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8811	8878	8944	9011	9078
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9544	9611	9677	9744
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0̄144	0̄211	0̄277	0̄344	0̄411
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0810	0877	0944	1010	1077
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1543	1610	1677	1743
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2143	2210	2276	2343	2409
6520	[illegible]	[illegible]	[illegible]	[illegible]	2742	2809	2876	2942	3009	3075
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3542	3608	3675	3741
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4207	4274	4341	4407
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4873	4940	5006	5073
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5539	5605	5672	5739
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6138	6204	6271	6338	6404
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6803	6870	6937	7003	7070
27	[illegible]	[illegible]	[illegible]	[illegible]	7402	[illegible]	7535	7602	7668	7735
28	[illegible]	7868	[illegible]	8001	8068	8134	8201	8267	8334	8400
29	[illegible]	8533	8600	[illegible]	8733	8799	8866	8932	8999	9065
6530	814 9132	9198	9265	9331	9398	9464	9531	9597	9664	9730
31	9797	9863	9930	9996	0̄063	0̄129	0̄196	0̄262	0̄329	0̄395
32	815 0462	0528	0595	0661	0728	0794	0861	0927	0994	1060
33	1127	1193	1260	1326	1392	1459	1525	1592	1658	1725
34	1791	1858	1924	1991	2057	2124	2190	2257	2323	2389
35	2456	2522	2589	2655	2722	2788	2855	2921	2988	3054
36	3120	3187	3253	3320	3386	3453	3519	3586	3652	3718
37	3785	3851	3918	3984	4051	4117	4183	4250	4316	4383
38	4449	4516	4582	4648	4715	4781	4848	4914	4981	5047
39	5113	5180	5246	5313	5379	5445	5512	5578	5645	5711
6540	815 5777	5844	5910	5977	6043	6109	6176	6242	6309	6375
41	6441	6508	6574	6641	6707	6773	6840	6906	6973	7039
42	7105	7172	7238	7305	7371	7437	7504	7570	7636	7703
43	7769	7836	7902	7968	8035	8101	8167	8234	8300	8367
44	8433	8499	8566	8632	8698	8765	8831	8897	8964	9030
45	9097	9163	9229	9296	9362	9428	9495	9561	9627	9694
46	9760	9826	9893	9959	0̄025	0̄092	0̄158	0̄224	0̄291	0̄357
47	816 0423	0490	0556	0622	0689	0755	0821	0888	0954	1020
48	1087	1153	1219	1286	1352	1418	1485	1551	1617	1684
49	1750	1816	1883	1949	2015	2081	2148	2214	2280	2347
6550	816 2413	2479	2546	2612	2678	2745	2811	2877	2943	3010
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	67
1	6.7
2	13.4
3	20.1
4	26.8
5	33.5
6	40.2
7	46.9
8	53.6
9	60.3

	66
1	6.6
2	13.2
3	19.8
4	26.4
5	33.0
6	39.6
7	46.2
8	52.8
9	59.4

65000″ = 18° 3′ 20″ 6500″ = 1° 48′ 20″ S. 4.685 5030 T. 7187
65100 = 18 5 0 6510 = 1 48 30 5028 7191
65200 = 18 6 40 6520 = 1 48 40 5025 7195
65300 = 18 8 20 6530 = 1 48 50 5023 7200
65400 = 18 10 0 6540 = 1 49 0 5021 7204

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6550	816 2413	2479	2546	2612	2678	2745	2811	2877	2943	3010	
51	3076	3142	3209	3275	3341	3407	3474	3540	3606	3673	
52	3739	3805	3871	3938	4004	4070	4137	4203	4269	4335	
53	4402	4468	4534	4600	4667	4733	4799	4866	4932	4998	
54	5064	5131	5197	5263	5329	5396	5462	5528	5594	5661	
55	5727	5793	5859	5926	5992	6058	6124	6191	6257	6323	
56	6389	6456	6522	6588	6654	6721	6787	6853	6919	6986	
57	7052	7118	7184	7251	7317	7383	7449	7515	7582	7648	
58	7714	7780	7847	7913	7979	8045	8111	8178	8244	8310	
59	8376	8443	8509	8575	8641	8707	8774	8840	8906	8972	
6560	816 9038	9105	9171	9237	9303	9369	9436	9502	9568	9634	
61	9700	9767	9833	9899	9965	$\bar{0}$031	$\bar{0}$098	$\bar{0}$164	$\bar{0}$230	$\bar{0}$296	66
62	817 0362	0428	0495	0561	0627	0693	0759	0826	0892	0958	1 6.6
63	1024	1090	1156	1223	1289	1355	1421	1487	1553	1620	2 13.2
64	1686	1752	1818	1884	1950	2017	2083	2149	2215	2281	3 19.8
65	2347	2413	2480	2546	2612	2678	2744	2810	2876	2943	4 26.4
66	3009	3075	3141	3207	3273	3339	3406	3472	3538	3604	5 33.0 6 39.6
67	3670	3736	3802	3869	3935	4001	4067	4133	4199	4265	7 46 2
68	4331	4398	4464	4530	4596	4662	4728	4794	4860	4927	8 52.8
69	4993	5059	5125	5191	5257	5323	5389	5455	5521	5588	9 59.4
6570	817 5654	5720	5786	5852	5918	5984	6050	6116	6182	6249	
71	6315	6381	6447	6513	6579	6645	6711	6777	6843	6909	
72	6976	7042	7108	7174	7240	7306	7372	7438	7504	7570	
73	7636	7702	7768	7835	7901	7967	8033	8099	8165	8231	
74	8297	8363	8429	8495	8561	8627	8693	8759	8825	8892	
75	8958	9024	9090	9156	9222	9288	9354	9420	9486	9552	
76	9618	9684	9750	9816	9882	9948	$\bar{0}$014	$\bar{0}$080	$\bar{0}$146	$\bar{0}$212	
77	818 0278	0344	0410	0477	0543	0609	0675	0741	0807	0873	
78	0939	1005	1071	1137	1203	1269	1335	1401	1467	1533	
79	1599	1665	1731	1797	1863	1929	1995	2061	2127	2193	
6580	818 2259	2325	2391	2457	2523	2589	2655	2721	2787	2853	
81	2919	2985	3051	3117	3183	3249	3315	3381	3447	3513	65
82	3579	3645	3711	3777	3843	3909	3975	4041	4107	4173	1 6.5
83	4239	4305	4370	4436	4502	4568	4634	4700	4766	4832	2 13.0
84	4898	4964	5030	5096	5162	5228	5294	5360	5426	5492	3 19.5
85	5558	5624	5690	5756	5822	5888	5953	6019	6085	6151	4 26.0
86	6217	6283	6349	6415	6481	6547	6613	6679	6745	6811	5 32.5 6 39.0
87	6877	6943	7008	7074	7140	7206	7272	7338	7404	7470	7 45.5
88	7536	7602	7668	7734	7800	7866	7931	7997	8063	8129	8 52.0
89	8195	8261	8327	8393	8459	8525	8591	8656	8722	8788	9 58.5
6590	818 8854	8920	8986	9052	9118	9184	9250	9315	9381	9447	
91	9513	9579	9645	9711	9777	9843	9908	9974	$\bar{0}$040	$\bar{0}$106	
92	819 0172	0238	0304	0370	0436	0501	0567	0633	0699	0765	
93	0831	0897	0962	1028	1094	1160	1226	1292	1358	1424	
94	1489	1555	1621	1687	1753	1819	1885	1950	2016	2082	
95	2148	2214	2280	2346	2411	2477	2543	2609	2675	2741	
96	2806	2872	2938	3004	3070	3136	3202	3267	3333	3399	
97	3465	3531	3597	3662	3728	3794	3860	3926	3991	4057	
98	4123	4189	4255	4321	4386	4452	4518	4584	4650	4715	
99	4781	4847	4913	4979	5045	5110	5176	5242	5308	5374	
6600	819 5439	5505	5571	5637	5703	5768	5834	5900	5966	6032	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

		S.	T.
65500″ = 18° 11′ 40″	6550″ = 1° 49′ 10″	4.685 5019	7209
65600 = 18 13 20	6560 = 1 49 20	5017	7213
65700 = 18 15 0	6570 = 1 49 30	5014	7218
65800 = 18 16 40	6580 = 1 49 40	5012	7222
65900 = 18 18 20	6590 = 1 49 50	5010	7227

N.	0	1	2	3	4	5	6	7	8	9
6600	819 5439	5505	5571	5637	5703	5768	5834	5900	5966	6032
01	6097	6163	6229	6295	6360	6426	6492	6558	6624	6689
02	6755	6821	6887	6953	7018	7084	7150	7216	7281	7347
03	7413	7479	7545	7610	7676	7742	7808	7873	7939	8005
04	8071	8136	8202	8268	8334	8399	8465	8531	8597	8662
05	8728	8794	8860	8925	8991	9057	9123	9188	9254	9320
06	9386	9451	9517	9583	9649	9714	9780	9846	9912	9977
07	820 0043	0109	0175	0240	0306	0372	0437	0503	0569	0635
08	0700	0766	0832	0898	0963	1029	1095	1160	1226	1292
09	1358	1423	1489	1555	1620	1686	1752	1817	1883	1949
6610	820 2015	2080	2146	2212	2277	2343	2409	2474	2540	2606
11	2672	2737	2803	2869	2934	3000	3066	3131	3197	3263
12	3328	3394	3460	3525	3591	3657	3723	3788	3854	3920
13	3985	4051	4117	4182	4248	4314	4379	4445	4511	4576
14	4642	4708	4773	4839	4905	4970	5036	5102	5167	5233
15	5298	5364	5430	5495	5561	5627	5692	5758	5824	5889
16	5955	6021	6086	6152	6218	6283	6349	6414	6480	6546
17	6611	6677	6743	6808	6874	6939	7005	7071	7136	7202
18	7268	7333	7399	7464	7530	7596	7661	7727	7793	7858
19	7924	7989	8055	8121	8186	8252	8317	8383	8449	8514
6620	820 8580	8645	8711	8777	8842	8908	8973	9039	9105	9170
21	9236	9301	9367	9433	9498	9564	9629	9695	9761	9826
22	9892	9957	0̄023	0̄089	0̄154	0̄220	0̄285	0̄351	0̄416	0̄482
23	821 0548	0613	0679	0744	0810	0875	0941	1007	1072	1138
24	1203	1269	1334	1400	1465	1531	1597	1662	1728	1793
25	1859	1924	1990	2055	2121	2187	2252	2318	2383	2449
26	2514	2580	2645	2711	2776	2842	2908	2973	3039	3104
27	3170	3235	3301	3366	3432	3497	3563	3628	3694	3759
28	3825	3891	3956	4022	4087	4153	4218	4284	4349	4415
29	4480	4546	4611	4677	4742	4808	4873	4939	5004	5070
6630	821 5135	5201	5266	5332	5397	5463	5528	5594	5659	5725
31	5790	5856	5921	5987	6052	6118	6183	6249	6314	6380
32	6445	6511	6576	6642	6707	6773	6838	6904	6969	7034
33	7100	7165	7231	7296	7362	7427	7493	7558	7624	7689
34	7755	7820	7886	7951	8017	8082	8147	8213	8278	8344
35	8409	8475	8540	8606	8671	8737	8802	8867	8933	8998
36	9064	9129	9195	9260	9326	9391	9456	9522	9587	9653
37	9718	9784	9849	9914	9980	0̄045	0̄111	0̄176	0̄242	0̄307
38	822 0372	0438	0503	0569	0634	0700	0765	0830	0896	0961
39	1027	1092	1158	1223	1288	1354	1419	1485	1550	1615
6640	822 1681	1746	1812	1877	1942	2008	2073	2139	2204	2269
41	2335	2400	2466	2531	2596	2662	2727	2793	2858	2923
42	2989	3054	3119	3185	3250	3316	3381	3446	3512	3577
43	3643	3708	3773	3839	3904	3969	4035	4100	4166	4231
44	4296	4362	4427	4492	4558	4623	4688	4754	4819	4884
45	4950	5015	5081	5146	5211	5277	5342	5407	5473	5538
46	5603	5669	5734	5799	5865	5930	5995	6061	6126	6191
47	6257	6322	6387	6453	6518	6583	6649	6714	6779	6845
48	6910	6975	7041	7106	7171	7237	7302	7367	7433	7498
49	7563	7629	7694	7759	7825	7890	7955	8021	8086	8151
6650	822 8216	8282	8347	8412	8478	8543	8608	8674	8739	8804
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	66
1	6.6
2	13.2
3	19.8
4	26.4
5	33.0
6	39.6
7	46.2
8	52.8
9	59.4

	65
1	6.5
2	13.0
3	19.5
4	26.0
5	32.5
6	39.0
7	45.5
8	52.0
9	58.5

P. P.

66000″ = 18° 20′ 0″ 6600″ = 1° 50′ 0″ S. 4.685 5008 T. 7231
66100 = 18 21 40 6610 = 1 50 10 5005 7236
66200 = 18 23 20 6620 = 1 50 20 5003 7240
66300 = 18 25 0 6630 = 1 50 30 5001 7345
66400 = 18 26 40 6640 = 1 50 40 4999 7249

N.	0	1	2	3	4	5	6	7	8	9	P.	P.
6650	822 8216	8282	8347	8412	8478	8543	8608	8674	8739	8804		
51	8869	8935	9000	9065	9131	9196	9261	9327	9392	9457		
52	9522	9588	9653	9718	9784	9849	9914	9979	0̄045	0̄110		
53	823 0175	0241	0306	0371	0436	0502	0567	0632	0697	0763		
54	0828	0893	0958	1024	1089	1154	1220	1285	1350	1415		
55	1481	1546	1611	1676	1742	1807	1872	1937	2003	2068		
56	2133	2198	2264	2329	2394	2459	2525	2590	2655	2720		
57	2786	2851	2916	2981	3047	3112	3177	3242	3307	3373		
58	3438	3503	3568	3634	3699	3764	3829	3894	3960	4025		
59	4090	4155	4221	4286	4351	4416	4481	4547	4612	4677		
6660	823 4742	4808	4873	4938	5003	5068	5134	5199	5264	5329		
61	5394	5460	5525	5590	5655	5720	5786	5851	5916	5981		65
62	6046	6111	6177	6242	6307	6372	6437	6503	6568	6633	1	6.5
63	6698	6763	6828	6894	6959	7024	7089	7154	7220	7285	2	13.0
64	7350	7415	7480	7545	7611	7676	7741	7806	7871	7936	3	19.5
65	8002	8067	8132	8197	8262	8327	8392	8458	8523	8588	4	26.0
66	8653	8718	8783	8849	8914	8979	9044	9109	9174	9239	5 6	32.5 39.0
67	9305	9370	9435	9500	9565	9630	9695	9761	9826	9891	7	45.5
68	9956	0̄021	0̄086	0̄151	0̄216	0̄282	0̄347	0̄412	0̄477	0̄542	8	52.0
69	824 0607	0672	0737	0803	0868	0933	0998	1063	1128	1193	9	58.5
6670	824 1258	1323	1389	1454	1519	1584	1649	1714	1779	1844		
71	1909	1975	2040	2105	2170	2235	2300	2365	2430	2495		
72	2560	2625	2691	2756	2821	2886	2951	3016	3081	3146		
73	3211	3276	3341	3406	3472	3537	3602	3667	3732	3797		
74	3862	3927	3992	4057	4122	4187	4252	4318	4383	4448		
75	4513	4578	4643	4708	4773	4838	4903	4968	5033	5098		
76	5163	5228	5293	5358	5423	5489	5554	5619	5684	5749		
77	5814	5879	5944	6009	6074	6139	6204	6269	6334	6399		
78	6464	6529	6594	6659	6724	6789	6854	6919	6984	7049		
79	7114	7179	7244	7310	7375	7440	7505	7570	7635	7700		
6680	824 7765	7830	7895	7960	8025	8090	8155	8220	8285	8350		
81	8415	8480	8545	8610	8675	8740	8805	8870	8935	9000		64
82	9065	9130	9195	9260	9325	9390	9455	9520	9585	9650	1	6.4
83	9715	9780	9845	9910	9975	0̄040	0̄105	0̄169	0̄234	0̄299	2	12.8
84	825 0364	0429	0494	0559	0624	0689	0754	0819	0884	0949	3	19.2
85	1014	1079	1144	1209	1274	1339	1404	1469	1534	1599	4	25.6
86	1664	1729	1794	1859	1924	1988	2053	2118	2183	2248	5 6	32.0 38.4
87	2313	2378	2443	2508	2573	2638	2703	2768	2833	2898	7	44.8
88	2963	3028	3093	3157	3222	3287	3352	3417	3482	3547	8	51.2
89	3612	3677	3742	3807	3872	3937	4002	4066	4131	4196	9	57.6
6690	825 4261	4326	4391	4456	4521	4586	4651	4716	4780	4845		
91	4910	4975	5040	5105	5170	5235	5300	5365	5430	5494		
92	5559	5624	5689	5754	5819	5884	5949	6014	6078	6143		
93	6208	6273	6338	6403	6468	6533	6598	6662	6727	6792		
94	6857	6922	6987	7052	7117	7181	7246	7311	7376	7441		
95	7506	7571	7636	7700	7765	7830	7895	7960	8025	8090		
96	8154	8219	8284	8349	8414	8479	8544	8608	8673	8738		
97	8803	8868	8933	8998	9062	9127	9192	9257	9322	9387		
98	9451	9516	9581	9646	9711	9776	9840	9905	9970	0̄035		
99	826 0100	0165	0229	0294	0359	0424	0489	0554	0618	0683		
6700	826 0748	0813	0878	0942	1007	1072	1137	1202	1267	1331		
N.	0	1	2	3	4	5	6	7	8	9	P.	P.

66500″ = 18° 28′ 20″	6650″ = 1° 50′ 50″	S. 4.685 4996	T. 7254
66600 = 18 30 0	6660 = 1 51 0	4994	7258
66700 = 18 31 40	6670 = 1 51 10	4992	7263
66800 = 18 33 20	6680 = 1 51 20	4989	7267
66900 = 18 35 0	6690 = 1 51 30	4987	7272

N.	0	1	2	3	4	5	6	7	8	9
6700	826 0748	0813	0878	0942	1007	1072	1137	1202	1267	1331
01	1396	1461	1526	1591	1655	1720	1785	1850	1915	1979
02	2044	2109	2174	2239	2303	2368	2433	2498	2563	2627
03	2692	2757	2822	2887	2951	3016	3081	3146	3210	3275
04	3340	3405	3470	3534	3599	3664	3729	3794	3858	3923
05	3988	4053	4117	4182	4247	4312	4376	4441	4506	4571
06	4635	4700	4765	4830	4895	4959	5024	5089	5154	5218
07	5283	5348	5413	5477	5542	5607	5672	5736	5801	5866
08	5931	5995	6060	6125	6190	6254	6319	6384	6448	6513
09	6578	6643	6707	6772	6837	6902	6966	7031	7096	7160
6710	826 7225	7290	7355	7419	7484	7549	7614	7678	7743	7808
11	7872	7937	8002	8067	8131	8196	8261	8325	8390	8455
12	8519	8584	8649	8714	8778	8843	8908	8972	9037	9102
13	9166	9231	9296	9361	9425	9490	9555	9619	9684	9749
14	9813	9878	9943	0̄007	0̄072	0̄137	0̄201	0̄266	0̄331	0̄395
15	827 0460	0525	0590	0654	0719	0784	0848	0913	0978	1042
16	1107	1172	1236	1301	1366	1430	1495	1560	1624	1689
17	1753	1818	1883	1947	2012	2077	2141	2206	2271	2335
18	2400	2465	2529	2594	2659	2723	2788	2852	2917	2982
19	3046	3111	3176	3240	3305	3370	3434	3499	3563	3628
6720	827 3693	3757	3822	3887	3951	4016	4080	4145	4210	4274
21	4339	4404	4468	4533	4597	4662	4727	4791	4856	4920
22	4985	5050	5114	5179	5244	5308	5373	5437	5502	5567
23	5631	5696	5760	5825	5889	5954	6019	6083	6148	6212
24	6277	6342	6406	6471	6535	6600	6665	6729	6794	6858
25	6923	6987	7052	7117	7181	7246	7310	7375	7439	7504
26	7569	7633	7698	7762	7827	7891	7956	8021	8085	8150
27	8214	8279	8343	8408	8473	8537	8602	8666	8731	8795
28	8860	8924	8989	9053	9118	9183	9247	9312	9376	9441
29	9505	9570	9634	9699	9763	9828	9893	9957	0̄022	0̄086
6730	828 0151	0215	0280	0344	0409	0473	0538	0602	0667	0731
31	0796	0860	0925	0989	1054	1119	1183	1248	1312	1377
32	1441	1506	1570	1635	1699	1764	1828	1893	1957	2022
33	2086	2151	2215	2280	2344	2409	2473	2538	2602	2667
34	2731	2796	2860	2925	2989	3054	3118	3183	3247	3312
35	3376	3440	3505	3569	3634	3698	3763	3827	3892	3956
36	4021	4085	4150	4214	4279	4343	4408	4472	4537	4601
37	4665	4730	4794	4859	4923	4988	5052	5117	5181	5246
38	5310	5375	5439	5503	5568	5632	5697	5761	5826	5890
39	5955	6019	6083	6148	6212	6277	6341	6406	6470	6535
6740	828 6599	6663	6728	6792	6857	6921	6986	7050	7114	7179
41	7243	7308	7372	7437	7501	7565	7630	7694	7759	7823
42	7887	7952	8016	8081	8145	8210	8274	8338	8403	8467
43	8532	8596	8660	8725	8789	8854	8918	8982	9047	9111
44	9176	9240	9304	9369	9433	9498	9562	9626	9691	9755
45	9820	9884	9948	0̄013	0̄077	0̄141	0̄206	0̄270	0̄335	0̄399
46	829 0463	0528	0592	0656	0721	0785	0850	0914	0978	1043
47	1107	1171	1236	1300	1365	1429	1493	1558	1622	1686
48	1751	1815	1879	1944	2008	2073	2137	2201	2266	2330
49	2394	2459	2523	2587	2652	2716	2780	2845	2909	2973
6750	829 3038	3102	3166	3231	3295	3359	3424	3488	3552	3617
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	65
1	6.5
2	13.0
3	19.5
4	26.0
5	32.5
6	39.0
7	45.5
8	52.0
9	58.5

	64
1	6.4
2	12.8
3	19.2
4	25.6
5	32.0
6	38.4
7	44.8
8	51.2
9	57.6

P. P.

		S.	T.
67000″ = 18° 36′ 40″	6700″ = 1° 51′ 40″	4.685 4985	7276
67100 = 18 38 20	6710 = 1 51 50	4983	7281
67200 = 18 40 0	6720 = 1 52 0	4980	7286
67300 = 18 41 40	6730 = 1 52 10	4978	7290
67400 = 18 43 20	6740 = 1 52 20	4976	7295

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6750	829 3038	3102	3166	3231	3295	3359	3424	3488	3552	3617	
51	3681	3745	3810	3874	3938	4003	4067	4131	4196	4260	
52	4324	4389	4453	4517	4582	4646	4710	4775	4839	4903	
53	4967	5032	5096	5160	5225	5289	5353	5418	5482	5546	
54	5611	5675	5739	5803	5868	5932	5996	6061	6125	6189	
55	6254	6318	6382	6446	6511	6575	6639	6704	6768	6832	
56	6896	6961	7025	7089	7154	7218	7282	7346	7411	7475	
57	7539	7603	7668	7732	7796	7861	7925	7989	8053	8118	
58	8182	8246	8310	8375	8439	8503	8567	8632	8696	8760	
59	8824	8889	8953	9017	9081	9146	9210	9274	9338	9403	
6760	829 9467	9531	9595	9660	9724	9788	9852	9917	9981	$\bar{0}$045	
61	830 0109	0174	0238	0302	0366	0431	0495	0559	0623	0687	64 1 6.4 2 12.8 3 19.2 4 25.6 5 32.0 6 38.4 7 44.8 8 51.2 9 57.6
62	0752	0816	0880	0944	1009	1073	1137	1201	1265	1330	
63	1394	1458	1522	1587	1651	1715	1779	1843	1908	1972	
64	2036	2100	2164	2229	2293	2357	2421	2485	2550	2614	
65	2678	2742	2806	2871	2935	2999	3063	3127	3192	3256	
66	3320	3384	3448	3512	3577	3641	3705	3769	3833	3898	
67	3962	4026	4090	4154	4218	4283	4347	4411	4475	4539	
68	4604	4668	4732	4796	4860	4924	4988	5053	5117	5181	
69	5245	5309	5373	5438	5502	5566	5630	5694	5758	5823	
6770	830 5887	5951	6015	6079	6143	6207	6272	6336	6400	6464	
71	6528	6592	6656	6721	6785	6849	6913	6977	7041	7105	
72	7169	7234	7298	7362	7426	7490	7554	7618	7683	7747	
73	7811	7875	7939	8003	8067	8131	8195	8260	8324	8388	
74	8452	8516	8580	8644	8708	8772	8837	8901	8965	9029	
75	9093	9157	9221	9285	9349	9413	9478	9542	9606	9670	
76	9734	9798	9862	9926	9990	$\bar{0}$054	$\bar{0}$119	$\bar{0}$183	$\bar{0}$247	$\bar{0}$311	
77	831 0375	0439	0503	0567	0631	0695	0759	0823	0887	0952	
78	1016	1080	1144	1208	1272	1336	1400	1464	1528	1592	
79	1656	1720	1784	1849	1913	1977	2041	2105	2169	2233	
6780	831 2297	2361	2425	2489	2553	2617	2681	2745	2809	2873	
81	2937	3001	3066	3130	3194	3258	3322	3386	3450	3514	63 1 6.3 2 12.6 3 18.9 4 25.2 5 31.5 6 37.8 7 44.1 8 50.4 9 56.7
82	3578	3642	3706	3770	3834	3898	3962	4026	4090	4154	
83	4218	4282	4346	4410	4474	4538	4602	4666	4730	4794	
84	4858	4922	4986	5050	5114	5178	5242	5306	5371	5435	
85	5499	5563	5627	5691	5755	5819	5883	5947	6011	6075	
86	6139	6203	6267	6331	6395	6459	6523	6587	6651	6715	
87	6778	6842	6906	6970	7034	7098	7162	7226	7290	7354	
88	7418	7482	7546	7610	7674	7738	7802	7866	7930	7994	
89	8058	8122	8186	8250	8314	8378	8442	8506	8570	8634	
6790	831 8698	8762	8826	8890	8954	9018	9081	9145	9209	9273	
91	9337	9401	9465	9529	9593	9657	9721	9785	9849	9913	
92	9977	$\bar{0}$041	$\bar{0}$105	$\bar{0}$169	$\bar{0}$233	$\bar{0}$296	$\bar{0}$360	$\bar{0}$424	$\bar{0}$488	$\bar{0}$552	
93	832 0616	0680	0744	0808	0872	0936	1000	1064	1128	1192	
94	1255	1319	1383	1447	1511	1575	1639	1703	1767	1831	
95	1895	1959	2022	2086	2150	2214	2278	2342	2406	2470	
96	2534	2598	2662	2725	2789	2853	2917	2981	3045	3109	
97	3173	3237	3300	3364	3428	3492	3556	3620	3684	3748	
98	3812	3875	3939	4003	4067	4131	4195	4259	4323	4387	
99	4450	4514	4578	4642	4706	4770	4834	4898	4961	5025	
6800	832 5089	5153	5217	5281	5345	5408	5472	5536	5600	5664	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

67500″ = 18° 45′ 0″ 6750″ = 1° 52′ 30″ S. 4.685 4973 T. 7299
67600 = 18 46 40 6760 = 1 52 40 4971 7304
67700 = 18 48 20 6770 = 1 52 50 4969 7309
67800 = 18 50 0 6780 = 1 53 0 4967 7313
67900 = 18 51 40 6790 = 1 53 10 4964 7318

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6800	832 5089	5153	5217	5281	5345	5408	5472	5536	5600	5664	
01	5728	5792	5855	5919	5983	6047	6111	6175	6239	6302	
02	6366	6430	6494	6558	6622	6686	6749	6813	6877	6941	
03	7005	7069	7132	7196	7260	7324	7388	7452	7515	7579	
04	7643	7707	7771	7835	7898	7962	8026	8090	8154	8217	
05	8281	8345	8409	8473	8537	8600	8664	8728	8792	8856	
06	8919	8983	9047	9111	9175	9238	9302	9366	9430	9494	
07	9558	9621	9685	9749	9813	9877	9940	0̄004	0̄068	0̄132	
08	833 0195	0259	0323	0387	0451	0514	0578	0642	0706	0770	
09	0833	0897	0961	1025	1088	1152	1216	1280	1344	1407	
6810	833 1471	1535	1599	1662	1726	1790	1854	1918	1981	2045	
11	2109	2173	2236	2300	2364	2428	2491	2555	2619	2683	64
12	2746	2810	2874	2938	3001	3065	3129	3193	3256	3320	1 6.4
13	3384	3448	3511	3575	3639	3703	3766	3830	3894	3958	2 12.8
14	4021	4085	4149	4212	4276	4340	4404	4467	4531	4595	3 19.2
15	4659	4722	4786	4850	4913	4977	5041	5105	5168	5232	4 25.6
16	5296	5360	5423	5487	5551	5614	5678	5742	5806	5869	5 32.0 6 38.4
17	5933	5997	6060	6124	6188	6251	6315	6379	6443	6506	7 44.8
18	6570	6634	6697	6761	6825	6888	6952	7016	7080	7143	8 51.2
19	7207	7271	7334	7398	7462	7525	7589	7653	7716	7780	9 57.6
6820	833 7844	7907	7971	8035	8098	8162	8226	8289	8353	8417	
21	8480	8544	8608	8672	8735	8799	8862	8926	8990	9053	
22	9117	9181	9244	9308	9372	9435	9499	9563	9626	9690	
23	9754	9817	9881	9945	0̄008	0̄072	0̄136	0̄199	0̄263	0̄327	
24	834 0390	0454	0517	0581	0645	0708	0772	0836	0899	0963	
25	1027	1090	1154	1217	1281	1345	1408	1472	1536	1599	
26	1663	1726	1790	1854	1917	1981	2045	2108	2172	2235	
27	2299	2363	2426	2490	2553	2617	2681	2744	2808	2872	
28	2935	2999	3062	3126	3190	3253	3317	3380	3444	3508	
29	3571	3635	3698	3762	3826	3889	3953	4016	4080	4143	
6830	834 4207	4271	4334	4398	4461	4525	4589	4652	4716	4779	
31	4843	4906	4970	5034	5097	5161	5224	5288	5351	5415	63
32	5479	5542	5606	5669	5733	5796	5860	5924	5987	6051	1 6.3
33	6114	6178	6241	6305	6368	6432	6496	6559	6623	6686	2 12.6
34	6750	6813	6877	6940	7004	7067	7131	7195	7258	7322	3 18.9
35	7385	7449	7512	7576	7639	7703	7766	7830	7893	7957	4 25.2
36	8021	8084	8148	8211	8275	8338	8402	8465	8529	8592	5 31.5 6 37.8
37	8656	8719	8783	8846	8910	8973	9037	9100	9164	9227	7 44.1
38	9291	9354	9418	9481	9545	9609	9672	9736	9799	9863	8 50.4
39	9926	9990	0̄053	0̄117	0̄180	0̄244	0̄307	0̄371	0̄434	0̄498	9 56.7
6840	835 0561	0625	0688	0751	0815	0878	0942	1005	1069	1132	
41	1196	1259	1323	1386	1450	1513	1577	1640	1704	1767	
42	1831	1894	1958	2021	2085	2148	2212	2275	2338	2402	
43	2465	2529	2592	2656	2719	2783	2846	2910	2973	3037	
44	3100	3163	3227	3290	3354	3417	3481	3544	3608	3671	
45	3735	3798	3861	3925	3988	4052	4115	4179	4242	4306	
46	4369	4432	4496	4559	4623	4686	4750	4813	4876	4940	
47	5003	5067	5130	5194	5257	5320	5384	5447	5511	5574	
48	5638	5701	5764	5828	5891	5955	6018	6081	6145	6208	
49	6272	6335	6398	6462	6525	6589	6652	6716	6779	6842	
6850	835 6906	6969	7033	7096	7159	7223	7286	7349	7413	7476	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

68000″ = 18° 53′ 20″ 6800″ = 1° 53′ 20″ S. 4.685 4962 T. 7322
68100 = 18 55 0 6810 = 1 53 30 4960 7327
68200 = 18 56 40 6820 = 1 53 40 4957 7332
68300 = 18 58 20 6830 = 1 53 50 4955 7336
68400 = 19 0 0 6840 = 1 54 0 4953 7341

N.	0	1	2	3	4	5	6	7	8	9
6850	835 6906	6969	7033	7096	7159	7223	7286	7349	7413	7476
51	7540	7603	7666	7730	7793	7857	7920	7983	8047	8110
52	8174	8237	8300	8364	8427	8490	8554	8617	8681	8744
53	8807	8871	8934	8997	9061	9124	9188	9251	9314	9378
54	9441	9504	9568	9631	9694	9758	9821	9885	9948	$\bar{0}011$
55	836 0075	0138	0201	0265	0328	0391	0455	0518	0581	0645
56	0708	0771	0835	0898	0961	1025	1088	1151	1215	1278
57	1341	1405	1468	1531	1595	1658	1721	1785	1848	1911
58	1975	2038	2101	2165	2228	2291	2355	2418	2481	2545
59	2608	2671	2735	2798	2861	2925	2988	3051	3115	3178
6860	836 3241	3304	3368	3431	3494	3558	3621	3684	3748	3811
61	3874	3937	4001	4064	4127	4191	4254	4317	4381	4444
62	4507	4570	4634	4697	4760	4824	4887	4950	5013	5077
63	5140	5203	5267	5330	5393	5456	5520	5583	5646	5709
64	5773	5836	5899	5963	6026	6089	6152	6216	6279	6342
65	6405	6469	6532	6595	6658	6722	6785	6848	6911	6975
66	7038	7101	7164	7228	7291	7354	7417	7481	7544	7607
67	7670	7734	7797	7860	7923	7987	8050	8113	8176	8240
68	8303	8366	8429	8493	8556	8619	8682	8745	8809	8872
69	8935	8998	9062	9125	9188	9251	9314	9378	9441	9504
6870	836 9567	9631	9694	9757	9820	9883	9947	$\bar{0}010$	$\bar{0}073$	$\bar{0}136$
71	837 0199	0263	0326	0389	0452	0516	0579	0642	0705	0768
72	0832	0895	0958	1021	1084	1147	1211	1274	1337	1400
73	1463	1527	1590	1653	1716	1779	1843	1906	1969	2032
74	2095	2158	2222	2285	2348	2411	2474	2538	2601	2664
75	2727	2790	2853	2917	2980	3043	3106	3169	3232	3296
76	3359	3422	3485	3548	3611	3674	3738	3801	3864	3927
77	3990	4053	4117	4180	4243	4306	4369	4432	4495	4559
78	4622	4685	4748	4811	4874	4937	5001	5064	5127	5190
79	5253	5316	5379	5442	5506	5569	5632	5695	5758	5821
6880	837 5884	5948	6011	6074	6137	6200	6263	6326	6389	6452
81	6516	6579	6642	6705	6768	6831	6894	6957	7020	7084
82	7147	7210	7273	7336	7399	7462	7525	7588	7652	7715
83	7778	7841	7904	7967	8030	8093	8156	8219	8282	8346
84	8409	8472	8535	8598	8661	8724	8787	8850	8913	8976
85	9039	9103	9166	9229	9292	9355	9418	9481	9544	9607
86	9670	9733	9796	9859	9922	9986	$\bar{0}049$	$\bar{0}112$	$\bar{0}175$	$\bar{0}238$
87	838 0301	0364	0427	0490	0553	0616	0679	0742	0805	0868
88	0931	0994	1057	1121	1184	1247	1310	1373	1436	1499
89	1562	1625	1688	1751	1814	1877	1940	2003	2066	2129
6890	838 2192	2255	2318	2381	2444	2507	2570	2633	2696	2759
91	2822	2886	2949	3012	3075	3138	3201	3264	3327	3390
92	3453	3516	3579	3642	3705	3768	3831	3894	3957	4020
93	4083	4146	4209	4272	4335	4398	4461	4524	4587	4650
94	4713	4776	4839	4902	4965	5028	5091	5154	5217	5280
95	5343	5406	5469	5532	5595	5658	5721	5784	5847	5910
96	5973	6036	6098	6161	6224	6287	6350	6413	6476	6539
97	6602	6665	6728	6791	6854	6917	6980	7043	7106	7169
98	7232	7295	7358	7421	7484	7547	7610	7673	7736	7798
99	7861	7924	7987	8050	8113	8176	8239	8302	8365	8428
6900	838 8491	8554	8617	8680	8743	8806	8869	8931	8994	9057
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	63
1	6.3
2	12.6
3	18.9
4	25.2
5	31.5
6	37.8
7	44.1
8	50.4
9	56.7

	62
1	6.2
2	12.4
3	18.6
4	24.8
5	31.0
6	37.2
7	43.4
8	49.6
9	55.8

P. P.

68500″ = 19° 1′ 40″ 6850″ = 1° 54′ 10″ S. 4.685 4950 T. 7346
68600 = 19 3 20 6860 = 1 54 20 4948 7350
68700 = 19 5 0 6870 = 1 54 30 4946 7355
68800 = 19 6 40 6880 = 1 54 40 4943 7360
68900 = 19 8 20 6890 = 1 54 50 4941 7364

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6900	838 8491	8554	8617	8680	8743	8806	8869	8931	8994	9057	
01	9120	9183	9246	9309	9372	9435	9498	9561	9624	9687	
02	9750	9812	9875	9938	0̄001	0̄064	0̄127	0̄190	0̄253	0̄316	
03	839 0379	0442	0505	0567	0630	0693	0756	0819	0882	0945	
04	1008	1071	1134	1197	1259	1322	1385	1448	1511	1574	
05	1637	1700	1763	1826	1888	1951	2014	2077	2140	2203	
06	2266	2329	2392	2454	2517	2580	2643	2706	2769	2832	
07	2895	2957	3020	3083	3146	3209	3272	3335	3398	3460	
08	3523	3586	3649	3712	3775	3838	3900	3963	4026	4089	
09	4152	4215	4278	4341	4403	4466	4529	4592	4655	4718	
6910	839 4780	4843	4906	4969	5032	5095	5158	5220	5283	5346	
11	5409	5472	5535	5597	5660	5723	5786	5849	5912	5974	63 1 6.3 2 12.6 3 18.9 4 25.2 5 31.5 6 37.8 7 44.1 8 50.4 9 56.7
12	6037	6100	6163	6226	6289	6351	6414	6477	6540	6603	
13	6666	6728	6791	6854	6917	6980	7042	7105	7168	7231	
14	7294	7357	7419	7482	7545	7608	7671	7733	7796	7859	
15	7922	7985	8047	8110	8173	8236	8299	8361	8424	8487	
16	8550	8613	8675	8738	8801	8864	8927	8989	9052	9115	
17	9178	9241	9303	9366	9429	9492	9554	9617	9680	9743	
18	9806	9868	9931	9994	0̄057	0̄119	0̄182	0̄245	0̄308	0̄371	
19	840 0433	0496	0559	0622	0684	0747	0810	0873	0935	0998	
6920	840 1061	1124	1186	1249	1312	1375	1437	1500	1563	1626	
21	1688	1751	1814	1877	1939	2002	2065	2128	2190	2253	
22	2316	2379	2441	2504	2567	2630	2692	2755	2818	2881	
23	2943	3006	3069	3132	3194	3257	3320	3382	3445	3508	
24	3571	3633	3696	3759	3821	3884	3947	4010	4072	4135	
25	4198	4260	4323	4386	4449	4511	4574	4637	4699	4762	
26	4825	4888	4950	5013	5076	5138	5201	5264	5326	5389	
27	5452	5515	5577	5640	5703	5765	5828	5891	5953	6016	
28	6079	6141	6204	6267	6330	6392	6455	6518	6580	6643	
29	6706	6768	6831	6894	6956	7019	7082	7144	7207	7270	
6930	840 7332	7395	7458	7520	7583	7646	7708	7771	7834	7896	
31	7959	8022	8084	8147	8210	8272	8335	8398	8460	8523	62 1 6.2 2 12.4 3 18.6 4 24.8 5 31.0 6 37.2 7 43.4 8 49.6 9 55.8
32	8586	8648	8711	8773	8836	8899	8961	9024	9087	9149	
33	9212	9275	9337	9400	9463	9525	9588	9650	9713	9776	
34	9838	9901	9964	0̄026	0̄089	0̄152	0̄214	0̄277	0̄339	0̄402	
35	841 0465	0527	0590	0653	0715	0778	0840	0903	0966	1028	
36	1091	1153	1216	1279	1341	1404	1467	1529	1592	1654	
37	1717	1780	1842	1905	1967	2030	2093	2155	2218	2280	
38	2343	2406	2468	2531	2593	2656	2719	2781	2844	2906	
39	2969	3031	3094	3157	3219	3282	3344	3407	3470	3532	
6940	841 3595	3657	3720	3782	3845	3908	3970	4033	4095	4158	
41	4220	4283	4346	4408	4471	4533	4596	4658	4721	4784	
42	4846	4909	4971	5034	5096	5159	5221	5284	5347	5409	
43	5472	5534	5597	5659	5722	5784	5847	5909	5972	6035	
44	6097	6160	6222	6285	6347	6410	6472	6535	6597	6660	
45	6723	6785	6848	6910	6973	7035	7098	7160	7223	7285	
46	7348	7410	7473	7535	7598	7660	7723	7785	7848	7910	
47	7973	8036	8098	8161	8223	8286	8348	8411	8473	8536	
48	8598	8661	8723	8786	8848	8911	8973	9036	9098	9161	
49	9223	9286	9348	9411	9473	9536	9598	9661	9723	9786	
6950	841 9848	9911	9973	0̄036	0̄098	0̄160	0̄223	0̄285	0̄348	0̄410	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

69000″ = 19° 10′ 0″	6900″ = 1° 55′ 0″	S. 4.685 4939	T. 7369
69100 = 19 11 40	6910 = 1 55 10	4936	7374
69200 = 19 13 20	6920 = 1 55 20	4934	7378
69300 = 19 15 0	6930 = 1 55 30	4932	7383
69400 = 19 16 40	6940 = 1 55 40	4929	7388

N.	0	1	2	3	4	5	6	7	8	9	P. P.
6950	841 9848	9911	9973	0̄036	0̄098	0̄160	0̄223	0̄285	0̄348	0̄410	
51	842 0473	0535	0598	0660	0723	0785	0848	0910	0973	1035	
52	1098	1160	1223	1285	1348	1410	1472	1535	1597	1660	
53	1722	1785	1847	1910	1972	2035	2097	2160	2222	2284	
54	2347	2409	2472	2534	2597	2659	2722	2784	2846	2909	
55	2971	3034	3096	3159	3221	3284	3346	3408	3471	3533	
56	3596	3658	3721	3783	3845	3908	3970	4033	4095	4158	
57	4220	4282	4345	4407	4470	4532	4595	4657	4719	4782	
58	4844	4907	4969	5031	5094	5156	5219	5281	5344	5406	
59	5468	5531	5593	5656	5718	5780	5843	5905	5968	6030	
6960	842 6092	6155	6217	6280	6342	6404	6467	6529	6592	6654	63
61	6716	6779	6841	6904	6966	7028	7091	7153	7215	7278	1 6.3
62	7340	7403	7465	7527	7590	7652	7714	7777	7839	7902	2 12.6
63	7964	8026	8089	8151	8213	8276	8338	8401	8463	8525	3 18.9
64	8588	8650	8712	8775	8837	8899	8962	9024	9086	9149	4 25.2
65	9211	9274	9336	9398	9461	9523	9585	9648	9710	9772	5 31.5
66	9835	9897	9959	0̄022	0̄084	0̄146	0̄209	0̄271	0̄333	0̄396	6 37.8
67	843 0458	0520	0583	0645	0707	0770	0832	0894	0957	1019	7 44.1
68	1081	1144	1206	1268	1331	1393	1455	1518	1580	1642	8 50.4
69	1705	1767	1829	1892	1954	2016	2079	2141	2203	2265	9 56.7
6970	843 2328	2390	2452	2515	2577	2639	2702	2764	2826	2889	
71	2951	3013	3075	3138	3200	3262	3325	3387	3449	3511	
72	3574	3636	3698	3761	3823	3885	3948	4010	4072	4134	
73	4197	4259	4321	4383	4446	4508	4570	4633	4695	4757	
74	4819	4882	4944	5006	5069	5131	5193	5255	5318	5380	
75	5442	5504	5567	5629	5691	5753	5816	5878	5940	6002	
76	6065	6127	6189	6251	6314	6376	6438	6500	6563	6625	
77	6687	6749	6812	6874	6936	6998	7061	7123	7185	7247	
78	7310	7372	7434	7496	7559	7621	7683	7745	7808	7870	
79	7932	7994	8056	8119	8181	8243	8305	8368	8430	8492	
6980	843 8554	8616	8679	8741	8803	8865	8928	8990	9052	9114	62
81	9176	9239	9301	9363	9425	9487	9550	9612	9674	9736	1 6.2
82	9798	9861	9923	9985	0̄047	0̄109	0̄172	0̄234	0̄296	0̄358	2 12.4
83	844 0420	0483	0545	0607	0669	0731	0794	0856	0918	0980	3 18.6
84	1042	1104	1167	1229	1291	1353	1415	1478	1540	1602	4 24.8
85	1664	1726	1788	1851	1913	1975	2037	2099	2161	2224	5 31.0
86	2286	2348	2410	2472	2534	2597	2659	2721	2783	2845	6 37.2
87	2907	2970	3032	3094	3156	3218	3280	3343	3405	3467	7 43.4
88	3529	3591	3653	3715	3778	3840	3902	3964	4026	4088	8 49.6
89	4150	4213	4275	4337	4399	4461	4523	4585	4647	4710	9 55.8
6990	844 4772	4834	4896	4958	5020	5082	5145	5207	5269	5331	
91	5393	5455	5517	5579	5642	5704	5766	5828	5890	5952	
92	6014	6076	6138	6201	6263	6325	6387	6449	6511	6573	
93	6635	6697	6759	6822	6884	6946	7008	7070	7132	7194	
94	7256	7318	7380	7443	7505	7567	7629	7691	7753	7815	
95	7877	7939	8001	8063	8126	8188	8250	8312	8374	8436	
96	8498	8560	8622	8684	8746	8808	8870	8933	8995	9057	
97	9119	9181	9243	9305	9367	9429	9491	9553	9615	9677	
98	9739	9801	9863	9926	9988	0̄050	0̄112	0̄174	0̄236	0̄298	
99	845 0360	0422	0484	0546	0608	0670	0732	0794	0856	0918	
7000	845 0980	1042	1104	1167	1229	1291	1353	1415	1477	1539	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

69500″ = 19° 18′ 20″	6950″ = 1° 55′ 50″	S. 4.685 4927	T. 7393
69600 = 19 20 0	6960 = 1 56 0	4924	7397
69700 ± 19 21 40	6970 = 1 56 10	4922	7402
69800 = 19 23 20	6980 = 1 56 20	4920	7407
69900 = 19 25 0	6990 = 1 56 30	4917	7412

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7000	845 0980	1042	1104	1167	1229	1291	1353	1415	1477	1539	
01	1601	1663	1725	1787	1849	1911	1973	2035	2097	2159	
02	2221	2283	2345	2407	2469	2531	2593	2655	2717	2779	
03	2841	2903	2965	3027	3089	3151	3213	3275	3337	3399	
04	3461	3523	3585	3647	3709	3771	3833	3895	3957	4019	
05	4081	4143	4205	4267	4329	4391	4453	4515	4577	4639	
06	4701	4763	4825	4887	4949	5011	5073	5135	5197	5259	
07	5321	5383	5445	5507	5569	5631	5693	5755	5817	5879	
08	5941	6003	6065	6127	6189	6251	6313	6375	6437	6499	
09	6561	6623	6685	6746	6808	6870	6932	6994	7056	7118	
7010	845 7180	7242	7304	7366	7428	7490	7552	7614	7676	7738	
11	7800	7862	7924	7986	8047	8109	8171	8233	8295	8357	63
12	8419	8481	8543	8605	8667	8729	8791	8853	8915	8976	1 6.3
13	9038	9100	9162	9224	9286	9348	9410	9472	9534	9596	2 12.6
14	9658	9720	9781	9843	9905	9967	0̄029	0̄091	0̄153	0̄215	3 18.9 4 25.2
15	846 0277	0339	0401	0462	0524	0586	0648	0710	0772	0834	5 31.5
16	0896	0958	1020	1082	1143	1205	1267	1329	1391	1453	6 37.8
17	1515	1577	1639	1700	1762	1824	1886	1948	2010	2072	7 44.1
18	2134	2196	2257	2319	2381	2443	2505	2567	2629	2691	8 50.4
19	2752	2814	2876	2938	3000	3062	3124	3186	3247	3309	9 56.7
7020	846 3371	3433	3495	3557	3619	3680	3742	3804	3866	3928	
21	3990	4052	4113	4175	4237	4299	4361	4423	4485	4546	
22	4608	4670	4732	4794	4856	4917	4979	5041	5103	5165	
23	5227	5289	5350	5412	5474	5536	5598	5660	5721	5783	
24	5845	5907	5969	6031	6092	6154	6216	6278	6340	6401	
25	6463	6525	6587	6649	6711	6772	6834	6896	6958	7020	
26	7081	7143	7205	7267	7329	7391	7452	7514	7576	7638	
27	7700	7761	7823	7885	7947	8009	8070	8132	8194	8256	
28	8318	8379	8441	8503	8565	8626	8688	8750	8812	8874	
29	8935	8997	9059	9121	9183	9244	9306	9368	9430	9491	
7030	846 9553	9615	9677	9739	9800	9862	9924	9986	0̄047	0̄109	
31	847 0171	0233	0295	0356	0418	0480	0542	0603	0665	0727	62
32	0789	0850	0912	0974	1036	1097	1159	1221	1283	1344	1 6.2
33	1406	1468	1530	1591	1653	1715	1777	1838	1900	1962	2 12.4
34	2024	2085	2147	2209	2271	2332	2394	2456	2518	2579	3 18.6 4 24.8
35	2641	2703	2764	2826	2888	2950	3011	3073	3135	3197	5 31.0
36	3258	3320	3382	3443	3505	3567	3629	3690	3752	3814	6 37.2
37	3876	3937	3999	4061	4122	4184	4246	4307	4369	4431	7 43.4
38	4493	4554	4616	4678	4739	4801	4863	4925	4986	5048	8 49.6
39	5110	5171	5233	5295	5356	5418	5480	5542	5603	5665	9 55.8
7040	847 5727	5788	5850	5912	5973	6035	6097	6158	6220	6282	
41	6343	6405	6467	6528	6590	6652	6714	6775	6837	6899	
42	6960	7022	7084	7145	7207	7269	7330	7392	7454	7515	
43	7577	7639	7700	7762	7824	7885	7947	8009	8070	8132	
44	8193	8255	8317	8378	8440	8502	8563	8625	8687	8748	
45	8810	8872	8933	8995	9057	9118	9180	9241	9303	9365	
46	9426	9488	9550	9611	9673	9735	9796	9858	9919	9981	
47	848 0043	0104	0166	0228	0289	0351	0412	0474	0536	0597	
48	0659	0721	0782	0844	0905	0967	1029	1090	1152	1213	
49	1275	1337	1398	1460	1522	1583	1645	1706	1768	1830	
7050	848 1891	1953	2014	2076	2138	2199	2261	2322	2384	2446	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

70000″ = 19° 26′ 40″ 7000″ = 1° 56′ 40″ S. 4.685 4915 T. 7416
70100 = 19 28 20 7010 = 1 56 50 4913 7421
70200 = 19 30 0 7020 = 1 57 0 4910 7426
70300 = 19 31 40 7030 = 1 57 10 4908 7431
70400 = 19 33 20 7040 = 1 57 20 4905 7436

N.	0	1	2	3	4	5	6	7	8	9
7050	848 1891	1953	2014	2076	2138	2199	2261	2322	2384	2446
51	2507	2569	2630	2692	2754	2815	2877	2938	3000	3061
52	3123	3185	3246	3308	3369	3431	3493	3554	3616	3677
53	3739	3800	3862	3924	3985	4047	4108	4170	4231	4293
54	4355	4416	4478	4539	4601	4662	4724	4786	4847	4909
55	4970	5032	5093	5155	5216	5278	5340	5401	5463	5524
56	5586	5647	5709	5770	5832	5893	5955	6017	6078	6140
57	6201	6263	6324	6386	6447	6509	6570	6632	6693	6755
58	6817	6878	6940	7001	7063	7124	7186	7247	7309	7370
59	7432	7493	7555	7616	7678	7739	7801	7862	7924	7985
7060	848 8047	8109	8170	8232	8293	8355	8416	8478	8539	8601
61	8662	8724	8785	8847	8908	8970	9031	9093	9154	9216
62	9277	9339	9400	9462	9523	9585	9646	9708	9769	9831
63	9892	9954	0̄015	0̄077	0̄138	0̄199	0̄261	0̄322	0̄384	0̄445
64	849 0507	0568	0630	0691	0753	0814	0876	0937	0999	1060
65	1122	1183	1245	1306	1368	1429	1490	1552	1613	1675
66	1736	1798	1859	1921	1982	2044	2105	2167	2228	2289
67	2351	2412	2474	2535	2597	2658	2720	2781	2843	2904
68	2965	3027	3088	3150	3211	3273	3334	3396	3457	3518
69	3580	3641	3703	3764	3826	3887	3948	4010	4071	4133
7070	849 4194	4256	4317	4378	4440	4501	4563	4624	4686	4747
71	4808	4870	4931	4993	5054	5115	5177	5238	5300	5361
72	5423	5484	5545	5607	5668	5730	5791	5852	5914	5975
73	6037	6098	6159	6221	6282	6344	6405	6466	6528	6589
74	6651	6712	6773	6835	6896	6958	7019	7080	7142	7203
75	7264	7326	7387	7449	7510	7571	7633	7694	7755	7817
76	7878	7940	8001	8062	8124	8185	8246	8308	8369	8431
77	8492	8553	8615	8676	8737	8799	8860	8922	8983	9044
78	9106	9167	9228	9290	9351	9412	9474	9535	9596	9658
79	9719	9780	9842	9903	9965	0̄026	0̄087	0̄149	0̄210	0̄271
7080	850 0333	0394	0455	0517	0578	0639	0701	0762	0823	0885
81	0946	1007	1069	1130	1191	1253	1314	1375	1437	1498
82	1559	1621	1682	1743	1805	1866	1927	1988	2050	2111
83	2172	2234	2295	2356	2418	2479	2540	2602	2663	2724
84	2786	2847	2908	2969	3031	3092	3153	3215	3276	3337
85	3399	3460	3521	3582	3644	3705	3766	3828	3889	3950
86	4011	4073	4134	4195	4257	4318	4379	4440	4502	4563
87	4624	4686	4747	4808	4869	4931	4992	5053	5115	5176
88	5237	5298	5360	5421	5482	5543	5605	5666	5727	5788
89	5850	5911	5972	6034	6095	6156	6217	6279	6340	6401
7090	850 6462	6524	6585	6646	6707	6769	6830	6891	6952	7014
91	7075	7136	7197	7259	7320	7381	7442	7504	7565	7626
92	7687	7749	7810	7871	7932	7993	8055	8116	8177	8238
93	8300	8361	8422	8483	8545	8606	8667	8728	8789	8851
94	8912	8973	9034	9095	9157	9218	9279	9340	9402	9463
95	9524	9585	9646	9708	9769	9830	9891	9952	0̄014	0̄075
96	851 0136	0197	0258	0320	0381	0442	0503	0564	0626	0687
97	0748	0809	0870	0932	0993	1054	1115	1176	1238	1299
98	1360	1421	1482	1544	1605	1666	1727	1788	1849	1911
99	1972	2033	2094	2155	2216	2278	2339	2400	2461	2522
7100	851 2583	2645	2706	2767	2828	2889	2950	3012	3073	3134
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	62
1	6.2
2	12.4
3	18.6
4	24.8
5	31.0
6	37.2
7	43.4
8	49.6
9	55.8

	61
1	6.1
2	12.2
3	18.3
4	24.4
5	30.5
6	36.6
7	42.7
8	48.8
9	54.9

70500″ = 19° 35′ 0″ 7050″ = 1° 57′ 30″ S. 4.685 4903 T. 7440
70600 = 19 36 40 7060 = 1 57 40 4901 7445
70700 = 19 38 20 7070 = 1 57 50 4898 7450
70800 = 19 40 0 7080 = 1 58 0 4896 7455
70900 = 19 41 40 7090 = 1 58 10 4893 7460

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7100	851 2583	2645	2706	2767	2828	2889	2950	3012	3073	3134	
01	3195	3256	3317	3379	3440	3501	3562	3623	3684	3746	
02	3807	3868	3929	3990	4051	4112	4174	4235	4296	4357	
03	4418	4479	4540	4602	4663	4724	4785	4846	4907	4968	
04	5030	5091	5152	5213	5274	5335	5396	5457	5519	5580	
05	5641	5702	5763	5824	5885	5946	6008	6069	6130	6191	
06	6252	6313	6374	6435	6496	6558	6619	6680	6741	6802	
07	6863	6924	6985	7046	7108	7169	7230	7291	7352	7413	
08	7474	7535	7596	7657	7719	7780	7841	7902	7963	8024	
09	8085	8146	8207	8268	8329	8391	8452	8513	8574	8635	
7110	851 8696	8757	8818	8879	8940	9001	9062	9124	9185	9246	
11	9307	9368	9429	9490	9551	9612	9673	9734	9795	9856	62 1 6.2 2 12.4 3 18.6 4 24.8 5 31.0 6 37.2 7 43.4 8 49.6 9 55.8
12	9917	9979	0̄040	0̄101	0̄162	0̄223	0̄284	0̄345	0̄406	0̄467	
13	852 0528	0589	0650	0711	0772	0833	0894	0955	1017	1078	
14	1139	1200	1261	1322	1383	1444	1505	1566	1627	1688	
15	1749	1810	1871	1932	1993	2054	2115	2176	2237	2298	
16	2359	2420	2481	2542	2604	2665	2726	2787	2848	2909	
17	2970	3031	3092	3153	3214	3275	3336	3397	3458	3519	
18	3580	3641	3702	3763	3824	3885	3946	4007	4068	4129	
19	4190	4251	4312	4373	4434	4495	4556	4617	4678	4739	
7120	852 4800	4861	4922	4983	5044	5105	5166	5227	5288	5349	
21	5410	5471	5532	5593	5654	5715	5776	5837	5898	5959	
22	6020	6081	6142	6203	6264	6325	6386	6447	6508	6568	
23	6629	6690	6751	6812	6873	6934	6995	7056	7117	7178	
24	7239	7300	7361	7422	7483	7544	7605	7666	7727	7788	
25	7849	7910	7971	8032	8092	8153	8214	8275	8336	8397	
26	8458	8519	8580	8641	8702	8763	8824	8885	8946	9007	
27	9068	9129	9189	9250	9311	9372	9433	9494	9555	9616	
28	9677	9738	9799	9860	9921	9982	0̄042	0̄103	0̄164	0̄225	
29	853 0286	0347	0408	0469	0530	0591	0652	0713	0773	0834	
7130	853 0895	0956	1017	1078	1139	1200	1261	1322	1383	1443	
31	1504	1565	1626	1687	1748	1809	1870	1931	1992	2052	61 1 6.1 2 12.2 3 18.3 4 24.4 5 30.5 6 36.6 7 42.7 8 48.8 9 54.9
32	2113	2174	2235	2296	2357	2418	2479	2540	2600	2661	
33	2722	2783	2844	2905	2966	3027	3088	3148	3209	3270	
34	3331	3392	3453	3514	3575	3635	3696	3757	3818	3879	
35	3940	4001	4062	4122	4183	4244	4305	4366	4427	4488	
36	4548	4609	4670	4731	4792	4853	4914	4974	5035	5096	
37	5157	5218	5279	5340	5400	5461	5522	5583	5644	5705	
38	5765	5826	5887	5948	6009	6070	6130	6191	6252	6313	
39	6374	6435	6495	6556	6617	6678	6739	6800	6860	6921	
7140	853 6982	7043	7104	7165	7225	7286	7347	7408	7469	7530	
41	7590	7651	7712	7773	7834	7894	7955	8016	8077	8138	
42	8198	8259	8320	8381	8442	8502	8563	8624	8685	8746	
43	8807	8867	8928	8989	9050	9110	9171	9232	9293	9354	
44	9414	9475	9536	9597	9658	9718	9779	9840	9901	9962	
45	854 0022	0083	0144	0205	0265	0326	0387	0448	0509	0569	
46	0630	0691	0752	0812	0873	0934	0995	1056	1116	1177	
47	1238	1299	1359	1420	1481	1542	1602	1663	1724	1785	
48	1845	1906	1967	2028	2088	2149	2210	2271	2331	2392	
49	2453	2514	2574	2635	2696	2757	2817	2878	2939	3000	
7150	854 3060	3121	3182	3243	3303	3364	3425	3486	3546	3607	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

71000″ = 19° 43′ 20″	7100″ = 1° 58′ 20″	S. 4.685 4891	T. 7464
71100 = 19 45 0	7110 = 1 58 30	4889	7469
71200 = 19 46 40	7120 = 1 58 40	4886	7474
71300 = 19 48 20	7130 = 1 58 50	4884	7479
71400 = 19 50 0	7140 = 1 59 0	4881	7484

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7150	854 3060	3121	3182	3243	3303	3364	3425	3486	3546	3607	
51	3668	3729	3789	3850	3911	3971	4032	4093	4154	4214	
52	4275	4336	4397	4457	4518	4579	4639	4700	4761	4822	
53	4882	4943	5004	5064	5125	5186	5247	5307	5368	5429	
54	5489	5550	5611	5671	5732	5793	5854	5914	5975	6036	
55	6096	6157	6218	6278	6339	6400	6461	6521	6582	6643	
56	6703	6764	6825	6885	6946	7007	7067	7128	7189	7249	
57	7310	7371	7432	7492	7553	7614	7674	7735	7796	7856	
58	7917	7978	8038	8099	8160	8220	8281	8342	8402	8463	
59	8524	8584	8645	8706	8766	8827	8888	8948	9009	9070	
7160	854 9130	9191	9252	9312	9373	9433	9494	9555	9615	9676	
61	9737	9797	9858	9919	9979	0̄040	0̄101	0̄161	0̄222	0̄283	61
62	855 0343	0404	0464	0525	0586	0646	0707	0768	0828	0889	1 6.1
63	0950	1010	1071	1131	1192	1253	1313	1374	1435	1495	2 12.2
64	1556	1616	1677	1738	1798	1859	1919	1980	2041	2101	3 18.3
65	2162	2223	2283	2344	2404	2465	2526	2586	2647	2707	4 24.4
66	2768	2829	2889	2950	3010	3071	3132	3192	3253	3313	5 30.5
67	3374	3435	3495	3556	3616	3677	3738	3798	3859	3919	6 36.6
68	3980	4041	4101	4162	4222	4283	4343	4404	4465	4525	7 42.7
69	4586	4646	4707	4768	4828	4889	4949	5010	5070	5131	8 48.8
7170	855 5192	5252	5313	5373	5434	5494	5555	5616	5676	5737	9 54.9
71	5797	5858	5918	5979	6039	6100	6161	6221	6282	6342	
72	6403	6463	6524	6584	6645	6706	6766	6827	6887	6948	
73	7008	7069	7129	7190	7250	7311	7372	7432	7493	7553	
74	7614	7674	7735	7795	7856	7916	7977	8037	8098	8159	
75	8219	8280	8340	8401	8461	8522	8582	8643	8703	8764	
76	8824	8885	8945	9006	9066	9127	9187	9248	9308	9369	
77	9429	9490	9550	9611	9672	9732	9793	9853	9914	9974	
78	856 0035	0095	0156	0216	0277	0337	0398	0458	0519	0579	
79	0640	0700	0761	0821	0882	0942	1002	1063	1123	1184	
7180	856 1244	1305	1365	1426	1486	1547	1607	1668	1728	1789	
81	1849	1910	1970	2031	2091	2152	2212	2273	2333	2394	
82	2454	2514	2575	2635	2696	2756	2817	2877	2938	2998	
83	3059	3119	3180	3240	3301	3361	3421	3482	3542	3603	60
84	3663	3724	3784	3845	3905	3965	4026	4086	4147	4207	1 6.0
85	4268	4328	4389	4449	4509	4570	4630	4691	4751	4812	2 12.0
86	4872	4933	4993	5053	5114	5174	5235	5295	5356	5416	3 18.0
87	5476	5537	5597	5658	5718	5779	5839	5899	5960	6020	4 24.0
88	6081	6141	6202	6262	6322	6383	6443	6504	6564	6624	5 30.0
89	6685	6745	6806	6866	6926	6987	7047	7108	7168	7229	6 36.0
7190	856 7289	7349	7410	7470	7531	7591	7651	7712	7772	7832	7 42.0
91	7893	7953	8014	8074	8134	8195	8255	8316	8376	8436	8 48.0
92	8497	8557	8618	8678	8738	8799	8859	8919	8980	9040	9 54.0
93	9101	9161	9221	9282	9342	9402	9463	9523	9584	9644	
94	9704	9765	9825	9885	9946	0̄006	0̄067	0̄127	0̄187	0̄248	
95	857 0308	0368	0429	0489	0549	0610	0670	0730	0791	0851	
96	0912	0972	1032	1093	1153	1213	1274	1334	1394	1455	
97	1515	1575	1636	1696	1756	1817	1877	1937	1998	2058	
98	2118	2179	2239	2299	2360	2420	2480	2541	2601	2661	
99	2722	2782	2842	2903	2963	3023	3084	3144	3204	3265	
7200	857 3325	3385	3446	3506	3566	3627	3687	3747	3807	3868	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

71500″ = 19° 51′ 40″	7150″ = 1° 59′ 10″	S. 4.685 4879	T. 7489
71600 = 19 53 20	7160 = 1 59 20	4876	7494
71700 = 19 55 0	7170 = 1 59 30	4874	7498
71800 = 19 56 40	7180 = 1 59 40	4872	7503
71000 = 19 58 20	7190 = 1 59 50	4869	7508

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7200	857 3325	3385	3446	3506	3566	3627	3687	3747	3807	3868	
01	3928	3988	4049	4109	4169	4230	4290	4350	4411	4471	
02	4531	4591	4652	4712	4772	4833	4893	4953	5014	5074	
03	5134	5194	5255	5315	5375	5436	5496	5556	5616	5677	
04	5737	5797	5858	5918	5978	6038	6099	6159	6219	6280	
05	6340	6400	6460	6521	6581	6641	6701	6762	6822	6882	
06	6943	7003	7063	7123	7184	7244	7304	7364	7425	7485	
07	7545	7605	7666	7726	7786	7847	7907	7967	8027	8088	
08	8148	8208	8268	8329	8389	8449	8509	8570	8630	8690	
09	8750	8810	8871	8931	8991	9051	9112	9172	9232	9292	
7210	857 9353	9413	9473	9533	9594	9654	9714	9774	9835	9895	
11	9955	$\bar{0}015$	$\bar{0}075$	$\bar{0}136$	$\bar{0}196$	$\bar{0}256$	$\bar{0}316$	$\bar{0}377$	$\bar{0}437$	$\bar{0}497$	61
12	858 0557	0617	0678	0738	0798	0858	0918	0979	1039	1099	1 6.1
13	1159	1220	1280	1340	1400	1460	1521	1581	1641	1701	2 12.2
14	1761	1822	1882	1942	2002	2062	2123	2183	2243	2303	3 18.3
15	2363	2424	2484	2544	2604	2664	2724	2785	2845	2905	4 24.4
16	2965	3025	3086	3146	3206	3266	3326	3387	3447	3507	5 30.5 6 36.6
17	3567	3627	3687	3748	3808	3868	3928	3988	4048	4109	7 42.7
18	4169	4229	4289	4349	4409	4470	4530	4590	4650	4710	8 48.8
19	4770	4831	4891	4951	5011	5071	5131	5192	5252	5312	9 54.9
7220	858 5372	5432	5492	5552	5613	5673	5733	5793	5853	5913	
21	5973	6034	6094	6154	6214	6274	6334	6394	6455	6515	
22	6575	6635	6695	6755	6815	6876	6936	6996	7056	7116	
23	7176	7236	7296	7357	7417	7477	7537	7597	7657	7717	
24	7777	7837	7898	7958	8018	8078	8138	8198	8258	8318	
25	8379	8439	8499	8559	8619	8679	8739	8799	8859	8919	
26	8980	9040	9100	9160	9220	9280	9340	9400	9460	9520	
27	9581	9641	9701	9761	9821	9881	9941	$\bar{0}001$	$\bar{0}061$	$\bar{0}121$	
28	859 0181	0242	0302	0362	0422	0482	0542	0602	0662	0722	
29	0782	0842	0902	0962	1023	1083	1143	1203	1263	1323	
7230	859 1383	1443	1503	1563	1623	1683	1743	1803	1863	1924	
31	1984	2044	2104	2164	2224	2284	2344	2404	2464	2524	60
32	2584	2644	2704	2764	2824	2884	2944	3005	3065	3125	1 6.0
33	3185	3245	3305	3365	3425	3485	3545	3605	3665	3725	2 12.0
34	3785	3845	3905	3965	4025	4085	4145	4205	4265	4325	3 18.0
35	4385	4445	4505	4565	4625	4685	4746	4806	4866	4926	4 24.0
36	4986	5046	5106	5166	5226	5286	5346	5406	5466	5526	5 30.0 6 36.0
37	5586	5646	5706	5766	5826	5886	5946	6006	6066	6126	7 42.0
38	6186	6246	6306	6366	6426	6486	6546	6606	6666	6726	8 48.0
39	6786	6846	6906	6966	7026	7086	7146	7206	7266	7326	9 54.0
7240	859 7386	7446	7506	7566	7626	7686	7746	7806	7866	7925	
41	7985	8045	8105	8165	8225	8285	8345	8405	8465	8525	
42	8585	8645	8705	8765	8825	8885	8945	9005	9065	9125	
43	9185	9245	9305	9365	9425	9485	9545	9605	9665	9724	
44	9784	9844	9904	9964	$\bar{0}024$	$\bar{0}084$	$\bar{0}144$	$\bar{0}204$	$\bar{0}264$	$\bar{0}324$	
45	860 0384	0444	0504	0564	0624	0684	0744	0803	0863	0923	
46	0983	1043	1103	1163	1223	1283	1343	1403	1463	1523	
47	1583	1643	1702	1762	1822	1882	1942	2002	2062	2122	
48	2182	2242	2302	2362	2422	2481	2541	2601	2661	2721	
49	2781	2841	2901	2961	3021	3081	3140	3200	3260	3320	
7250	860 3380	3440	3500	3560	3620	3680	3739	3799	3859	3919	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

72000″ = 20° 0′ 0″ 7200″ = 2° 0′ 0″ S. 4.685 4867 T. 7513
72100 = 20 1 40 7210 = 2 0 10 4864 7518
72200 = 20 3 20 7220 = 2 0 20 4862 7523
72300 = 20 5 0 7230 = 2 0 30 4859 7528
72400 = 20 6 40 7240 = 2 0 40 4857 7533

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7250	860 3380	3440	3500	3560	3620	3680	3739	3799	3859	3919	
51	3979	4039	4099	4159	4219	4279	4338	4398	4458	4518	
52	4578	4638	4698	4758	4817	4877	4937	4997	5057	5117	
53	5177	5237	5297	5356	5416	5476	5536	5596	5656	5716	
54	5776	5835	5895	5955	6015	6075	6135	6195	6254	6314	
55	6374	6434	6494	6554	6614	6673	6733	6793	6853	6913	
56	6973	7033	7092	7152	7212	7272	7332	7392	7452	7511	
57	7571	7631	7691	7751	7811	7870	7930	7990	8050	8110	
58	8170	8229	8289	8349	8409	8469	8529	8588	8648	8708	
59	8768	8828	8888	8947	9007	9067	9127	9187	9247	9306	
7260	860 9366	9426	9486	9546	9605	9665	9725	9785	9845	9905	
61	9964	0̄024	0̄084	0̄144	0̄204	0̄263	0̄323	0̄383	0̄443	0̄503	60
62	861 0562	0622	0682	0742	0802	0861	0921	0981	1041	1101	1 6.0
63	1160	1220	1280	1340	1400	1459	1519	1579	1639	1699	2 12.0
64	1758	1818	1878	1938	1997	2057	2117	2177	2237	2296	3 18.0
65	2356	2416	2476	2536	2595	2655	2715	2775	2834	2894	4 24.0
66	2954	3014	3073	3133	3193	3253	3313	3372	3432	3492	5 30.0 6 36.0
67	3552	3611	3671	3731	3791	3850	3910	3970	4030	4089	7 42.0
68	4149	4209	4269	4328	4388	4448	4508	4567	4627	4687	8 48.0
69	4747	4806	4866	4926	4986	5045	5105	5165	5225	5284	9 54.0
7270	861 5344	5404	5464	5523	5583	5643	5703	5762	5822	5882	
71	5941	6001	6061	6121	6180	6240	6300	6360	6419	6479	
72	6539	6598	6658	6718	6778	6837	6897	6957	7016	7076	
73	7136	7196	7255	7315	7375	7434	7494	7554	7614	7673	
74	7733	7793	7852	7912	7972	8031	8091	8151	8211	8270	
75	8330	8390	8449	8509	8569	8628	8688	8748	8808	8867	
76	8927	8987	9046	9106	9166	9225	9285	9345	9404	9464	
77	9524	9583	9643	9703	9762	9822	9882	9941	0̄001	0̄061	
78	862 0121	0180	0240	0300	0359	0419	0479	0538	0598	0658	
79	0717	0777	0837	0896	0956	1016	1075	1135	1194	1254	
7280	862 1314	1373	1433	1493	1552	1612	1672	1731	1791	1851	
81	1910	1970	2030	2089	2149	2209	2268	2328	2387	2447	59
82	2507	2566	2626	2686	2745	2805	2865	2924	2984	3043	1 5.9
83	3103	3163	3222	3282	3342	3401	3461	3520	3580	3640	2 11.8
84	3699	3759	3819	3878	3938	3997	4057	4117	4176	4236	3 17.7
85	4296	4355	4415	4474	4534	4594	4653	4713	4772	4832	4 23.6
86	4892	4951	5011	5070	5130	5190	5249	5309	5368	5428	5 29.5 6 35.4
87	5488	5547	5607	5666	5726	5786	5845	5905	5964	6024	7 41.3
88	6084	6143	6203	6262	6322	6382	6441	6501	6560	6620	8 47.2
89	6680	6739	6799	6858	6918	6977	7037	7097	7156	7216	9 53.1
7290	862 7275	7335	7394	7454	7514	7573	7633	7692	7752	7811	
91	7871	7931	7990	8050	8109	8169	8228	8288	8347	8407	
92	8467	8526	8586	8645	8705	8764	8824	8883	8943	9003	
93	9062	9122	9181	9241	9300	9360	9419	9479	9539	9598	
94	9658	9717	9777	9836	9896	9955	0̄015	0̄074	0̄134	0̄193	
95	863 0253	0312	0372	0432	0491	0551	0610	0670	0729	0789	
96	0848	0908	0967	1027	1086	1146	1205	1265	1324	1384	
97	1443	1503	1562	1622	1682	1741	1801	1860	1920	1979	
98	2039	2098	2158	2217	2277	2336	2396	2455	2515	2574	
99	2634	2693	2753	2812	2872	2931	2991	3050	3110	3169	
7300	863 3229	3288	3348	3407	3467	3526	3586	3645	3705	3764	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

72500″ = 20° 8′ 20″ 7250″ = 2° 0′ 50″ S. 4.685 4854 T. 7538
72600 = 20 10 0 7260 = 2 1 0 4852 7543
72700 = 20 11 40 7270 = 2 1 10 4849 7548
72800 = 20 13 20 7280 = 2 1 20 4847 7553
72900 = 20 15 0 7290 = 2 1 30 4844 7557

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7300	863 3229	3288	3348	3407	3467	3526	3586	3645	3705	3764	
01	3823	3883	3942	4002	4061	4121	4180	4240	4299	4359	
02	4418	4478	4537	4597	4656	4716	4775	4835	4894	4954	
03	5013	5072	5132	5191	5251	5310	5370	5429	5489	5548	
04	5608	5667	5727	5786	5845	5905	5964	6024	6083	6143	
05	6202	6262	6321	6381	6440	6499	6559	6618	6678	6737	
06	6797	6856	6916	6975	7034	7094	7153	7213	7272	7332	
07	7391	7451	7510	7569	7629	7688	7748	7807	7867	7926	
08	7985	8045	8104	8164	8223	8283	8342	8401	8461	8520	
09	8580	8639	8698	8758	8817	8877	8936	8996	9055	9114	
7310	863 9174	9233	9293	9352	9411	9471	9530	9590	9649	9708	
11	9768	9827	9887	9946	0̄005	0̄065	0̄124	0̄184	0̄243	0̄302	60
12	864 0362	0421	0481	0540	0599	0659	0718	0778	0837	0896	1 6.0
13	0956	1015	1075	1134	1193	1253	1312	1371	1431	1490	2 12.0
14	1550	1609	1668	1728	1787	1846	1906	1965	2025	2084	3 18.0
15	2143	2203	2262	2321	2381	2440	2500	2559	2618	2678	4 24.0
16	2737	2796	2856	2915	2974	3034	3093	3152	3212	3271	5 30.0 6 36.0
17	3331	3390	3449	3509	3568	3627	3687	3746	3805	3865	7 42.0
18	3924	3983	4043	4102	4161	4221	4280	4339	4399	4458	8 48.0
19	4517	4577	4636	4695	4755	4814	4873	4933	4992	5051	9 54.0
7320	864 5111	5170	5229	5289	5348	5407	5467	5526	5585	5645	
21	5704	5763	5823	5882	5941	6001	6060	6119	6179	6238	
22	6297	6357	6416	6475	6534	6594	6653	6712	6772	6831	
23	6890	6950	7009	7068	7128	7187	7246	7305	7365	7424	
24	7483	7543	7602	7661	7721	7780	7839	7898	7958	8017	
25	8076	8136	8195	8254	8313	8373	8432	8491	8551	8610	
26	8669	8728	8788	8847	8906	8966	9025	9084	9143	9203	
27	9262	9321	9380	9440	9499	9558	9618	9677	9736	9795	
28	9855	9914	9973	0̄032	0̄092	0̄151	0̄210	0̄269	0̄329	0̄388	
29	865 0447	0506	0566	0625	0684	0743	0803	0862	0921	0980	
7330	865 1040	1099	1158	1217	1277	1336	1395	1454	1514	1573	
31	1632	1691	1751	1810	1869	1928	1988	2047	2106	2165	59
32	2225	2284	2343	2402	2461	2521	2580	2639	2698	2758	1 5.9
33	2817	2876	2935	2995	3054	3113	3172	3231	3291	3350	2 11.8
24	3409	3468	3527	3587	3646	3705	3764	3824	3883	3942	3 17.7
35	4001	4060	4120	4179	4238	4297	4356	4416	4475	4534	4 23.6
36	4593	4652	4712	4771	4830	4889	4948	5008	5067	5126	5 29.5 6 35.4
37	5185	5244	5304	5363	5422	5481	5540	5600	5659	5718	7 41.3
38	5777	5836	5895	5955	6014	6073	6132	6191	6251	6310	8 47.2
39	6369	6428	6487	6546	6606	6665	6724	6783	6842	6901	9 53.1
7340	865 6961	7020	7079	7138	7197	7256	7316	7375	7434	7493	
41	7552	7611	7671	7730	7789	7848	7907	7966	8025	8085	
42	8144	8203	8262	8321	8380	8440	8499	8558	8617	8676	
43	8735	8794	8854	8913	8972	9031	9090	9149	9208	9268	
44	9327	9386	9445	9504	9563	9622	9681	9741	9800	9859	
45	9918	9977	0̄036	0̄095	0̄155	0̄214	0̄273	0̄332	0̄391	0̄450	
46	866 0509	0568	0627	0687	0746	0805	0864	0923	0982	1041	
47	1100	1160	1219	1278	1337	1396	1455	1514	1573	1632	
48	1691	1751	1810	1869	1928	1987	2046	2105	2164	2223	
49	2282	2342	2401	2460	2519	2578	2637	2696	2755	2814	
7350	866 2873	2932	2992	3051	3110	3169	3228	3287	3346	3405	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

73000″ = 20° 16′ 40″ 7300″ = 2° 1′ 40″ S. 4.685 4842 T. 7562
73100 = 20 18 20 7310 = 2 1 50 4840 7567
73200 = 20 20 0 7320 = 2 2 0 4837 7572
73300 = 20 21 40 7330 = 2 2 10 4835 7577
73400 = 20 23 20 7340 = 2 2 20 4832 7582

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7350	866 2873	2932	2992	3051	3110	3169	3228	3287	3346	3405	
51	3464	3523	3582	3641	3701	3760	3819	3878	3937	3996	
52	4055	4114	4173	4232	4291	4350	4409	4468	4528	4587	
53	4646	4705	4764	4823	4882	4941	5000	5059	5118	5177	
54	5236	5295	5354	5413	5472	5532	5591	5650	5709	5768	
55	5827	5886	5945	6004	6063	6122	6181	6240	6299	6358	
56	6417	6476	6535	6594	6653	6712	6771	6830	6889	6949	
57	7008	7067	7126	7185	7244	7303	7362	7421	7480	7539	
58	7598	7657	7716	7775	7834	7893	7952	8011	8070	8129	
59	8188	8247	8306	8365	8424	8483	8542	8601	8660	8719	
7360	866 8778	8837	8896	8955	9014	9073	9132	9191	9250	9309	
61	9368	9427	9486	9545	9604	9663	9722	9781	9840	9899	59 1 5.9 2 11.8 3 17.7 4 23.6 5 29.5 6 35.4 7 41.3 8 47.2 9 53.1
62	9958	0̄017	0̄076	0̄135	0̄194	0̄253	0̄312	0̄371	0̄430	0̄489	
63	867 0548	0607	0666	0725	0784	0843	0902	0961	1020	1079	
64	1138	1197	1256	1315	1374	1433	1492	1551	1610	1669	
65	1728	1786	1845	1904	1963	2022	2081	2140	2199	2258	
66	2317	2376	2435	2494	2553	2612	2671	2730	2789	2848	
67	2907	2966	3025	3084	3142	3201	3260	3319	3378	3437	
68	3496	3555	3614	3673	3732	3791	3850	3909	3968	4027	
69	4086	4145	4203	4262	4321	4380	4439	4498	4557	4616	
7370	867 4675	4734	4793	4852	4911	4970	5028	5087	5146	5205	
71	5264	5323	5382	5441	5500	5559	5618	5677	5735	5794	
72	5853	5912	5971	6030	6089	6148	6207	6266	6325	6383	
73	6442	6501	6560	6619	6678	6737	6796	6855	6914	6972	
74	7031	7090	7149	7208	7267	7326	7385	7444	7502	7561	
75	7620	7679	7738	7797	7856	7915	7974	8032	8091	8150	
76	8209	8268	8327	8386	8445	8503	8562	8621	8680	8739	
77	8798	8857	8916	8974	9033	9092	9151	9210	9269	9328	
78	9387	9445	9504	9563	9622	9681	9740	9799	9857	9916	
79	9975	0̄034	0̄093	0̄152	0̄211	0̄269	0̄328	0̄387	0̄446	0̄505	
7380	868 0564	0622	0681	0740	0799	0858	0917	0976	1034	1093	
81	1152	1211	1270	1329	1387	1446	1505	1564	1623	1682	58 1 5.8 2 11.6 3 17.4 4 23.2 5 29.0 6 34.8 7 40.6 8 46.4 9 52.2
82	1740	1799	1858	1917	1976	2035	2093	2152	2211	2270	
83	2329	2388	2446	2505	2564	2623	2682	2740	2799	2858	
84	2917	2976	3035	3093	3152	3211	3270	3329	3387	3446	
85	3505	3564	3623	3681	3740	3799	3858	3917	3975	4034	
86	4093	4152	4211	4269	4328	4387	4446	4505	4563	4622	
87	4681	4740	4799	4857	4916	4975	5034	5093	5151	5210	
88	5269	5328	5386	5445	5504	5563	5622	5680	5739	5798	
89	5857	5915	5974	6033	6092	6151	6209	6268	6327	6386	
7390	868 6444	6503	6562	6621	6679	6738	6797	6856	6915	6973	
91	7032	7091	7150	7208	7267	7326	7385	7443	7502	7561	
92	7620	7678	7737	7796	7855	7913	7972	8031	8090	8148	
93	8207	8266	8325	8383	8442	8501	8560	8618	8677	8736	
94	8794	8853	8912	8971	9029	9088	9147	9206	9264	9323	
95	9382	9441	9499	9558	9617	9675	9734	9793	9852	9910	
96	9969	0̄028	0̄086	0̄145	0̄204	0̄263	0̄321	0̄380	0̄439	0̄497	
97	869 0556	0615	0674	0732	0791	0850	0908	0967	1026	1085	
98	1143	1202	1261	1319	1378	1437	1495	1554	1613	1672	
99	1730	1789	1848	1906	1965	2024	2082	2141	2200	2259	
7400	869 2317	2376	2435	2493	2552	2611	2669	2728	2787	2845	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

73500″ = 20° 25′ 0″   7350″ = 2° 2′ 30″   S. 4.685 4830   T. 7587
73600 = 20 26 40   7360 = 2 2 40   4827   7592
73700 = 20 28 20   7370 = 2 2 50   4825   7597
73800 = 20 30 0   7380 = 2 3 0   4822   7602
73900 = 20 31 40   7390 = 2 3 10   4820   7607

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7400	869 2317	2376	2435	2493	2552	2611	2669	2728	2787	2845	
01	2904	2963	3021	3080	3139	3197	3256	3315	3373	3432	
02	3491	3549	3608	3667	3725	3784	3843	3901	3960	4019	
03	4077	4136	4195	4253	4312	4371	4429	4488	4547	4605	
04	4664	4723	4781	4840	4899	4957	5016	5075	5133	5192	
05	5251	5309	5368	5427	5485	5544	5603	5661	5720	5778	
06	5837	5896	5954	6013	6072	6130	6189	6248	6306	6365	
07	6423	6482	6541	6599	6658	6717	6775	6834	6892	6951	
08	7010	7068	7127	7186	7244	7303	7361	7420	7479	7537	
09	7596	7655	7713	7772	7830	7889	7948	8006	8065	8123	
7410	869 8182	8241	8299	8358	8417	8475	8534	8592	8651	8710	
11	8768	8827	8885	8944	9003	9061	9120	9178	9237	9296	
12	9354	9413	9471	9530	9588	9647	9706	9764	9823	9881	
13	9940	9999	0̄057	0̄116	0̄174	0̄233	0̄292	0̄350	0̄409	0̄467	
14	870 0526	0584	0643	0702	0760	0819	0877	0936	0994	1053	
15	1112	1170	1229	1287	1346	1404	1463	1522	1580	1639	
16	1697	1756	1814	1873	1931	1990	2049	2107	2166	2224	
17	2283	2341	2400	2458	2517	2576	2634	2693	2751	2810	
18	2868	2927	2985	3044	3102	3161	3220	3278	3337	3395	
19	3454	3512	3571	3629	3688	3746	3805	3863	3922	3981	
7420	870 4039	4098	4156	4215	4273	4332	4390	4449	4507	4566	
21	4624	4683	4741	4800	4858	4917	4975	5034	5092	5151	
22	5210	5268	5327	5385	5444	5502	5561	5619	5678	5736	
23	5795	5853	5912	5970	6029	6087	6146	6204	6263	6321	
24	6380	6438	6497	6555	6614	6672	6731	6789	6848	6906	
25	6965	7023	7082	7140	7199	7257	7316	7374	7432	7491	
26	7549	7608	7666	7725	7783	7842	7900	7959	8017	8076	
27	8134	8193	8251	8310	8368	8427	8485	8544	8602	8660	
28	8719	8777	8836	8894	8953	9011	9070	9128	9187	9245	
29	9304	9362	9421	9479	9537	9596	9654	9713	9771	9830	
7430	870 9888	9947	0̄005	0̄063	0̄122	0̄180	0̄239	0̄297	0̄356	0̄414	
31	871 0473	0531	0589	0648	0706	0765	0823	0882	0940	0999	
32	1057	1115	1174	1232	1291	1349	1408	1466	1524	1583	
33	1641	1700	1758	1817	1875	1933	1992	2050	2109	2167	
34	2226	2284	2342	2401	2459	2518	2576	2634	2693	2751	
35	2810	2868	2927	2985	3043	3102	3160	3219	3277	3335	
36	3394	3452	3511	3569	3627	3686	3744	3803	3861	3919	
37	3978	4036	4095	4153	4211	4270	4328	4387	4445	4503	
38	4562	4620	4679	4737	4795	4854	4912	4970	5029	5087	
39	5146	5204	5262	5321	5379	5437	5496	5554	5613	5671	
7440	871 5729	5788	5846	5904	5963	6021	6080	6138	6196	6255	
41	6313	6371	6430	6488	6546	6605	6663	6722	6780	6838	
42	6897	6955	7013	7072	7130	7188	7247	7305	7363	7422	
43	7480	7539	7597	7655	7714	7772	7830	7889	7947	8005	
44	8064	8122	8180	8239	8297	8355	8414	8472	8530	8589	
45	8647	8705	8764	8822	8880	8939	8997	9055	9114	9172	
46	9230	9289	9347	9405	9464	9522	9580	9639	9697	9755	
47	9814	9872	9930	9988	0̄047	0̄105	0̄163	0̄222	0̄280	0̄338	
48	872 0397	0455	0513	0572	0630	0688	0747	0805	0863	0921	
49	0980	1038	1096	1155	1213	1271	1330	1388	1446	1504	
7450	872 1563	1621	1679	1738	1796	1854	1912	1971	2029	2087	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

	59
1	5.9
2	11.8
3	17.7
4	23.6
5	29.5
6	35.4
7	41.3
8	47.2
9	53.1

	58
1	5.8
2	11.6
3	17.4
4	23.2
5	29.0
6	34.8
7	40.6
8	46.4
9	52.2

74000″ = 20° 33′ 20″ 7400″ = 2° 3′ 20″ S. 4.685 4817 T. 7612
74100 = 20 35 0 7410 = 2 3 30 4814 7618
74200 = 20 36 40 7420 = 2 3 40 4812 7623
74300 = 20 38 20 7430 = 2 3 50 4809 7628
74400 = 20 40 0 7440 = 2 4 0 4807 7633

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7450	872 1563	1621	1679	1738	1796	1854	1912	1971	2029	2087	
51	2146	2204	2262	2320	2379	2437	2495	2554	2612	2670	
52	2728	2787	2845	2903	2962	3020	3078	3136	3195	3253	
53	3311	3369	3428	3486	3544	3603	3661	3719	3777	3836	
54	3894	3952	4010	4069	4127	4185	4243	4302	4360	4418	
55	4476	4535	4593	4651	4709	4768	4826	4884	4942	5001	
56	5059	5117	5175	5234	5292	5350	5408	5467	5525	5583	
57	5641	5700	5758	5816	5874	5933	5991	6049	6107	6166	
58	6224	6282	6340	6398	6457	6515	6573	6631	6690	6748	
59	6806	6864	6923	6981	7039	7097	7155	7214	7272	7330	
7460	872 7388	7446	7505	7563	7621	7679	7738	7796	7854	7912	
61	7970	8029	8087	8145	8203	8261	8320	8378	8436	8494	58
62	8552	8611	8669	8727	8785	8843	8902	8960	9018	9076	1 5.8
63	9134	9193	9251	9309	9367	9425	9484	9542	9600	9658	2 11.6
64	9716	9774	9833	9891	9949	0̄007	0̄065	0̄124	0̄182	0̄240	3 17.4
65	873 0298	0356	0414	0473	0531	0589	0647	0705	0764	0822	4 23.2
66	0880	0938	0996	1054	1113	1171	1229	1287	1345	1403	5 29.0 6 34.8
67	1462	1520	1578	1636	1694	1752	1810	1869	1927	1985	7 40.6
68	2043	2101	2159	2218	2276	2334	2392	2450	2508	2566	8 46.4
69	2625	2683	2741	2799	2857	2915	2973	3032	3090	3148	9 52.2
7470	873 3206	3264	3322	3380	3439	3497	3555	3613	3671	3729	
71	3787	3845	3904	3962	4020	4078	4136	4194	4252	4311	
72	4369	4427	4485	4543	4601	4659	4717	4775	4834	4892	
73	4950	5008	5066	5124	5182	5240	5298	5357	5415	5473	
74	5531	5589	5647	5705	5763	5821	5880	5938	5996	6054	
75	6112	6170	6228	6286	6344	6402	6461	6519	6577	6635	
76	6693	6751	6809	6867	6925	6983	7041	7100	7158	7216	
77	7274	7332	7390	7448	7506	7564	7622	7680	7738	7797	
78	7855	7913	7971	8029	8087	8145	8203	8261	8319	8377	
79	8435	8493	8551	8610	8668	8726	8784	8842	8900	8958	
7480	873 9016	9074	9132	9190	9248	9306	9364	9422	9480	9538	
81	9597	9655	9713	9771	9829	9887	9945	0̄003	0̄061	0̄119	57
82	874 0177	0235	0293	0351	0409	0467	0525	0583	0641	0699	1 5.7
83	0757	0815	0874	0932	0990	1048	1106	1164	1222	1280	2 11.4
84	1338	1396	1454	1512	1570	1628	1686	1744	1802	1860	3 17.1
85	1918	1976	2034	2092	2150	2208	2266	2324	2382	2440	4 22.8
86	2498	2556	2614	2672	2730	2788	2846	2904	2962	3020	5 28.5 6 34.2
87	3078	3136	3194	3252	3310	3368	3426	3484	3542	3600	7 39.9
88	3658	3716	3774	3832	3890	3948	4006	4064	4122	4180	8 45.6
89	4238	4296	4354	4412	4470	4528	4586	4644	4702	4760	9 51.3
7490	874 4818	4876	4934	4992	5050	5108	5166	5224	5282	5340	
91	5398	5456	5514	5572	5630	5688	5746	5804	5862	5920	
92	5978	6036	6094	6152	6210	6268	6325	6383	6441	6499	
93	6557	6615	6673	6731	6789	6847	6905	6963	7021	7079	
94	7137	7195	7253	7311	7369	7427	7485	7543	7600	7658	
95	7716	7774	7832	7890	7948	8006	8064	8122	8180	8238	
96	8296	8354	8412	8470	8528	8585	8643	8701	8759	8817	
97	8875	8933	8991	9049	9107	9165	9223	9281	9339	9396	
98	9454	9512	9570	9628	9686	9744	9802	9860	9918	9976	
99	875 0034	0091	0149	0207	0265	0323	0381	0439	0497	0555	
7500	875 0613	0671	0728	0786	0844	0902	0960	1018	1076	1134	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

74500″ = 20° 41′ 40″ 7450″ = 2° 4′ 10″ S. 4.685 4804 T. 7638
74600 = 20 43 20 7460 = 2 4 20 4802 7643
74700 = 20 45 0 7470 = 2 4 30 4799 7648
74800 = 20 46 40 7480 = 2 4 40 4797 7653
74900 = 20 48 20 7490 = 2 4 50 4794 7658

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7500	875 0613	0671	0728	0786	0844	0902	0960	1018	1076	1134	
01	1192	1250	1307	1365	1423	1481	1539	1597	1655	1713	
02	1771	1828	1886	1944	2002	2060	2118	2176	2234	2292	
03	2349	2407	2465	2523	2581	2639	2697	2755	2813	2870	
04	2928	2986	3044	3102	3160	3218	3275	3333	3391	3449	
05	3507	3565	3623	3681	3738	3796	3854	3912	3970	4028	
06	4086	4143	4201	4259	4317	4375	4433	4491	4548	4606	
07	4664	4722	4780	4838	4896	4953	5011	5069	5127	5185	
08	5243	5300	5358	5416	5474	5532	5590	5648	5705	5763	
09	5821	5879	5937	5995	6052	6110	6168	6226	6284	6342	
7510	875 6399	6457	6515	6573	6631	6689	6746	6804	6862	6920	
11	6978	7035	7093	7151	7209	7267	7325	7382	7440	7498	58
12	7556	7614	7671	7729	7787	7845	7903	7960	8018	8076	1 5.8
13	8134	8192	8249	8307	8365	8423	8481	8539	8596	8654	2 11.6
14	8712	8770	8828	8885	8943	9001	9059	9116	9174	9232	3 17.4
15	9290	9348	9405	9463	9521	9579	9637	9694	9752	9810	4 23.2
16	9868	9925	9983	0̄041	0̄099	0̄157	0̄214	0̄272	0̄330	0̄388	5 29.0 6 34.8
17	876 0446	0503	0561	0619	0677	0734	0792	0850	0908	0965	7 40.6
18	1023	1081	1139	1197	1254	1312	1370	1428	1485	1543	8 46.4
19	1601	1659	1716	1774	1832	1890	1947	2005	2063	2121	9 52.2
7520	876 2178	2236	2294	2352	2409	2467	2525	2583	2640	2698	
21	2756	2814	2871	2929	2987	3045	3102	3160	3218	3276	
22	3333	3391	3449	3506	3564	3622	3680	3737	3795	3853	
23	3911	3968	4026	4084	4142	4199	4257	4315	4372	4430	
24	4488	4546	4603	4661	4719	4776	4834	4892	4950	5007	
25	5065	5123	5180	5238	5296	5354	5411	5469	5527	5584	
26	5642	5700	5758	5815	5873	5931	5988	6046	6104	6161	
27	6219	6277	6335	6392	6450	6508	6565	6623	6681	6738	
28	6796	6854	6911	6969	7027	7085	7142	7200	7258	7315	
29	7373	7431	7488	7546	7604	7661	7719	7777	7834	7892	
7530	876 7950	8007	8065	8123	8180	8238	8296	8353	8411	8469	
31	8526	8584	8642	8699	8757	8815	8872	8930	8988	9045	57
32	9103	9161	9218	9276	9334	9391	9449	9507	9564	9622	1 5.7
33	9680	9737	9795	9853	9910	9968	0̄026	0̄083	0̄141	0̄199	2 11.4
34	877 0256	0314	0371	0429	0487	0544	0602	0660	0717	0775	3 17.1
35	0833	0890	0948	1005	1063	1121	1178	1236	1294	1351	4 22.8
36	1409	1467	1524	1582	1639	1697	1755	1812	1870	1928	5 28.5 6 34.2
37	1985	2043	2100	2158	2216	2273	2331	2388	2446	2504	7 39.9
38	2561	2619	2677	2734	2792	2849	2907	2965	3022	3080	8 45.6
39	3137	3195	3253	3310	3368	3425	3483	3541	3598	3656	9 51.3
7540	877 3713	3771	3829	3886	3944	4001	4059	4117	4174	4232	
41	4289	4347	4405	4462	4520	4577	4635	4693	4750	4808	
42	4865	4923	4980	5038	5096	5153	5211	5268	5326	5384	
43	5441	5499	5556	5614	5671	5729	5787	5844	5902	5959	
44	6017	6074	6132	6189	6247	6305	6362	6420	6477	6535	
45	6592	6650	6708	6765	6823	6880	6938	6995	7053	7110	
46	7168	7226	7283	7341	7398	7456	7513	7571	7628	7686	
47	7743	7801	7859	7916	7974	8031	8089	8146	8204	8261	
48	8319	8376	8434	8492	8549	8607	8664	8722	8779	8837	
49	8894	8952	9009	9067	9124	9182	9239	9297	9354	9412	
7550	877 9470	9527	9585	9642	9700	9757	9815	9872	9930	9987	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

75000″ = 20° 50′ 0″　7500″ = 2° 5′ 0″　S. 4.685 4792　T. 7663
75100 = 20 51 40　7510 = 2 5 10　4789　7668
75200 = 20 53 20　7520 = 2 5 20　4787　7673
75300 = 20 55 0　7530 = 2 5 30　4784　7679
75400 = 20 56 40　7540 = 2 5 40　4781　7684

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7550	877 9470	9527	9585	9642	9700	9757	9815	9872	9930	9987	
51	878 0045	0102	0160	0217	0275	0332	0390	0447	0505	0562	
52	0620	0677	0735	0792	0850	0907	0965	1022	1080	1137	
53	1195	1252	1310	1367	1425	1482	1540	1597	1655	1712	
54	1770	1827	1885	1942	2000	2057	2115	2172	2230	2287	
55	2345	2402	2460	2517	2575	2632	2690	2747	2805	2862	
56	2919	2977	3034	3092	3149	3207	3264	3322	3379	3437	
57	3494	3552	3609	3667	3724	3782	3839	3896	3954	4011	
58	4069	4126	4184	4241	4299	4356	4414	4471	4529	4586	
59	4643	4701	4758	4816	4873	4931	4988	5046	5103	5161	
7560	878 5218	5275	5333	5390	5448	5505	5563	5620	5678	5735	
61	5792	5850	5907	5965	6022	6080	6137	6194	6252	6309	58
62	6367	6424	6482	6539	6596	6654	6711	6769	6826	6884	1 5.8
63	6941	6998	7056	7113	7171	7228	7286	7343	7400	7458	2 11.6
64	7515	7573	7630	7687	7745	7802	7860	7917	7975	8032	3 17.4
65	8089	8147	8204	8262	8319	8376	8434	8491	8549	8606	4 23.2
66	8663	8721	8778	8836	8893	8950	9008	9065	9123	9180	5 29.0
67	9237	9295	9352	9410	9467	9524	9582	9639	9696	9754	6 34.8
68	9811	9869	9926	9983	$\bar{0}041$	$\bar{0}098$	$\bar{0}156$	$\bar{0}213$	$\bar{0}270$	$\bar{0}328$	7 40.6
69	879 0385	0442	0500	0557	0615	0672	0729	0787	0844	0901	8 46.4
7570	879 0959	1016	1074	1131	1188	1246	1303	1360	1418	1475	9 52.2
71	1532	1590	1647	1705	1762	1819	1877	1934	1991	2049	
72	2106	2163	2221	2278	2335	2393	2450	2508	2565	2622	
73	2680	2737	2794	2852	2909	2966	3024	3081	3138	3196	
74	3253	3310	3368	3425	3482	3540	3597	3654	3712	3769	
75	3826	3884	3941	3998	4056	4113	4170	4228	4285	4342	
76	4400	4457	4514	4572	4629	4686	4744	4801	4858	4916	
77	4973	5030	5088	5145	5202	5259	5317	5374	5431	5489	
78	5546	5603	5661	5718	5775	5833	5890	5947	6004	6062	
79	6119	6176	6234	6291	6348	6406	6463	6520	6577	6635	
7580	879 6692	6749	6807	6864	6921	6979	7036	7093	7150	7208	
81	7265	7322	7380	7437	7494	7551	7609	7666	7723	7781	57
82	7838	7895	7952	8010	8067	8124	8181	8239	8296	8353	1 5.7
83	8411	8468	8525	8582	8640	8697	8754	8811	8869	8926	2 11.4
84	8983	9041	9098	9155	9212	9270	9327	9384	9441	9499	3 17.1
85	9556	9613	9670	9728	9785	9842	9899	9957	$\bar{0}014$	$\bar{0}071$	4 22.8
86	880 0128	0186	0243	0300	0357	0415	0472	0529	0586	0644	5 28.5
87	0701	0758	0815	0873	0930	0987	1044	1102	1159	1216	6 34.2
88	1273	1330	1388	1445	1502	1559	1617	1674	1731	1788	7 39.9
89	1846	1903	1960	2017	2074	2132	2189	2246	2303	2361	8 45.6
7590	880 2418	2475	2532	2589	2647	2704	2761	2818	2875	2933	9 51.3
91	2990	3047	3104	3162	3219	3276	3333	3390	3448	3505	
92	3562	3619	3676	3734	3791	3848	3905	3962	4020	4077	
93	4134	4191	4248	4306	4363	4420	4477	4534	4592	4649	
94	4706	4763	4820	4877	4935	4992	5049	5106	5163	5221	
95	5278	5335	5392	5449	5507	5564	5621	5678	5735	5792	
96	5850	5907	5964	6021	6078	6135	6193	6250	6307	6364	
97	6421	6478	6536	6593	6650	6707	6764	6821	6879	6936	
98	6993	7050	7107	7164	7222	7279	7336	7393	7450	7507	
99	7564	7622	7679	7736	7793	7850	7907	7964	8022	8079	
7600	880 8136	8193	8250	8307	8364	8422	8479	8536	8593	8650	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

75500″ = 20° 58′ 20″ 7550″ = 2° 5′ 50″ S. 4.685 4779 T. 7689
75600 = 21 0 0 7560 = 2 6 0 4776 7694
75700 = 21 1 40 7570 = 2 6 10 4774 7699
75800 = 21 3 20 7580 = 2 6 20 4771 7704
75900 = 21 5 0 7590 = 2 6 30 4769 7709

N.	0	1	2	3	4	5	6	7	8	9
7600	880 8136	8193	8250	8307	8364	8422	8479	8536	8593	8650
01	8707	8764	8822	8879	8936	8993	9050	9107	9164	9222
02	9279	9336	9393	9450	9507	9564	9621	9679	9736	9793
03	9850	9907	9964	0̄021	0̄078	0̄136	0̄193	0̄250	0̄307	0̄364
04	881 0421	0478	0535	0592	0650	0707	0764	0821	0878	0935
05	0992	1049	1106	1163	1221	1278	1335	1392	1449	1506
06	1563	1620	1677	1735	1792	1849	1906	1963	2020	2077
07	2134	2191	2248	2305	2363	2420	2477	2534	2591	2648
08	2705	2762	2819	2876	2933	2990	3048	3105	3162	3219
09	3276	3333	3390	3447	3504	3561	3618	3675	3732	3789
7610	881 3847	3904	3961	4018	4075	4132	4189	4246	4303	4360
11	4417	4474	4531	4588	4645	4703	4760	4817	4874	4931
12	4988	5045	5102	5159	5216	5273	5330	5387	5444	5501
13	5558	5615	5672	5729	5786	5844	5901	5958	6015	6072
14	6129	6186	6243	6300	6357	6414	6471	6528	6585	6642
15	6699	6756	6813	6870	6927	6984	7041	7098	7155	7212
16	7269	7326	7383	7440	7497	7554	7611	7669	7726	7783
17	7840	7897	7954	8011	8068	8125	8182	8239	8296	8353
18	8410	8467	8524	8581	8638	8695	8752	8809	8866	8923
19	8980	9037	9094	9151	9208	9265	9322	9379	9436	9493
7620	881 9550	9607	9664	9721	9778	9835	9892	9949	0̄006	0̄063
21	882 0120	0177	0234	0291	0348	0405	0462	0519	0575	0632
22	0689	0746	0803	0860	0917	0974	1031	1088	1145	1202
23	1259	1316	1373	1430	1487	1544	1601	1658	1715	1772
24	1829	1886	1943	2000	2057	2114	2171	2228	2285	2342
25	2398	2455	2512	2569	2626	2683	2740	2797	2854	2911
26	2968	3025	3082	3139	3196	3253	3310	3367	3424	3481
27	3537	3594	3651	3708	3765	3822	3879	3936	3993	4050
28	4107	4164	4221	4278	4335	4392	4448	4505	4562	4619
29	4676	4733	4790	4847	4904	4961	5018	5075	5132	5188
7630	882 5245	5302	5359	5416	5473	5530	5587	5644	5701	5758
31	5815	5871	5928	5985	6042	6099	6156	6213	6270	6327
32	6384	6441	6497	6554	6611	6668	6725	6782	6839	6896
33	6953	7010	7066	7123	7180	7237	7294	7351	7408	7465
34	7522	7578	7635	7692	7749	7806	7863	7920	7977	8034
35	8090	8147	8204	8261	8318	8375	8432	8489	8545	8602
36	8659	8716	8773	8830	8887	8944	9000	9057	9114	9171
37	9228	9285	9342	9399	9455	9512	9569	9626	9683	9740
38	9797	9853	9910	9967	0̄024	0̄081	0̄138	0̄195	0̄251	0̄308
39	883 0365	0422	0479	0536	0593	0650	0706	0763	0820	0877
7640	883 0934	0990	1047	1104	1161	1218	1275	1331	1388	1445
41	1502	1559	1616	1673	1729	1786	1843	1900	1957	2014
42	2070	2127	2184	2241	2298	2354	2411	2468	2525	2582
43	2639	2695	2752	2809	2866	2923	2980	3036	3093	3150
44	3207	3264	3320	3377	3434	3491	3548	3604	3661	3718
45	3775	3832	3889	3945	4002	4059	4116	4173	4229	4286
46	4343	4400	4457	4513	4570	4627	4684	4741	4797	4854
47	4911	4968	5024	5081	5138	5195	5252	5308	5365	5422
48	5479	5536	5592	5649	5706	5763	5819	5876	5933	5990
49	6047	6103	6160	6217	6274	6330	6387	6444	6501	6558
7650	883 6614	6671	6728	6785	6841	6898	6955	7012	7068	7125
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	58
1	5.8
2	11.6
3	17.4
4	23.2
5	29.0
6	34.8
7	40.6
8	46.4
9	52.2

	57
1	5.7
2	11.4
3	17.1
4	22.8
5	28.5
6	34.2
7	39.9
8	45.6
9	51.3

76000″ = 21° 6′ 40″ 7600″ = 2° 6′ 40″ S. 4.685 4766 T. 7715
76100 = 21 8 20 7610 = 2 6 50 4763 7720
76200 = 21 10 0 7620 = 2 7 0 4761 7725
76300 = 21 11 40 7630 = 2 7 10 4758 7730
76400 = 21 13 20 7640 = 2 7 20 4756 7735

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7650	883 6614	6671	6728	6785	6841	6898	6955	7012	7068	7125	
51	7182	7239	7296	7352	7409	7466	7523	7579	7636	7693	
52	7750	7806	7863	7920	7977	8033	8090	8147	8204	8260	
53	8317	8374	8431	8487	8544	8601	8658	8714	8771	8828	
54	8885	8941	8998	9055	9112	9168	9225	9282	9338	9395	
55	9452	9509	9565	9622	9679	9736	9792	9849	9906	9963	
56	884 0019	0076	0133	0189	0246	0303	0360	0416	0473	0530	
57	0586	0643	0700	0757	0813	0870	0927	0983	1040	1097	
58	1154	1210	1267	1324	1380	1437	1494	1551	1607	1664	
59	1721	1777	1834	1891	1948	2004	2061	2118	2174	2231	
7660	884 2288	2344	2401	2458	2514	2571	2628	2685	2741	2798	
61	2855	2911	2968	3025	3081	3138	3195	3251	3308	3365	57
62	3421	3478	3535	3592	3648	3705	3762	3818	3875	3932	1 5.7
63	3988	4045	4102	4158	4215	4272	4328	4385	4442	4498	2 11.4
64	4555	4612	4668	4725	4782	4838	4895	4952	5008	5065	3 17.1
65	5122	5178	5235	5292	5348	5405	5462	5518	5575	5631	4 22.8
66	5688	5745	5801	5858	5915	5971	6028	6085	6141	6198	5 28.5 6 34.2
67	6255	6311	6368	6425	6481	6538	6594	6651	6708	6764	7 39.9
68	6821	6878	6934	6991	7048	7104	7161	7217	7274	7331	8 45.6
69	7387	7444	7501	7557	7614	7671	7727	7784	7840	7897	9 51.3
7670	884 7954	8010	8067	8124	8180	8237	8293	8350	8407	8463	
71	8520	8576	8633	8690	8746	8803	8860	8916	8973	9029	
72	9086	9143	9199	9256	9312	9369	9426	9482	9539	9595	
73	9652	9709	9765	9822	9878	9935	9992	0̄048	0̄105	0̄161	
74	885 0218	0275	0331	0388	0444	0501	0557	0614	0671	0727	
75	0784	0840	0897	0954	1010	1067	1123	1180	1237	1293	
76	1350	1406	1463	1519	1576	1633	1689	1746	1802	1859	
77	1915	1972	2029	2085	2142	2198	2255	2311	2368	2425	
78	2481	2538	2594	2651	2707	2764	2820	2877	2934	2990	
79	3047	3103	3160	3216	3273	3329	3386	3443	3499	3556	
7680	885 3612	3669	3725	3782	3838	3895	3951	4008	4065	4121	
81	4178	4234	4291	4347	4404	4460	4517	4573	4630	4686	56
82	4743	4800	4856	4913	4969	5026	5082	5139	5195	5252	1 5.6
83	5308	5365	5421	5478	5534	5591	5647	5704	5761	5817	2 11.2
84	5874	5930	5987	6043	6100	6156	6213	6269	6326	6382	3 16.8
85	6439	6495	6552	6608	6665	6721	6778	6834	6891	6947	4 22.4
86	7004	7060	7117	7173	7230	7286	7343	7399	7456	7512	5 28.0 6 33.6
87	7569	7625	7682	7738	7795	7851	7908	7964	8021	8077	7 39.2
88	8134	8190	8247	8303	8360	8416	8473	8529	8586	8642	8 44.8
89	8699	8755	8812	8868	8925	8981	9037	9094	9150	9207	9 50.4
7690	885 9263	9320	9376	9433	9489	9546	9602	9659	9715	9772	
91	9828	9885	9941	9998	0̄054	0̄110	0̄167	0̄223	0̄280	0̄336	
92	886 0393	0449	0506	0562	0619	0675	0732	0788	0844	0901	
93	0957	1014	1070	1127	1183	1240	1296	1352	1409	1465	
94	1522	1578	1635	1691	1748	1804	1860	1917	1973	2030	
95	2086	2143	2199	2256	2312	2368	2425	2481	2538	2594	
96	2651	2707	2763	2820	2876	2933	2989	3046	3102	3158	
97	3215	3271	3328	3384	3441	3497	3553	3610	3666	3723	
98	3779	3835	3892	3948	4005	4061	4118	4174	4230	4287	
99	886 4343	4400	4456	4512	4569	4625	4682	4738	4794	4851	
7700	886 4907	4964	5020	5076	5133	5189	5246	5302	5358	5415	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

76500″ = 21° 15′ 0″ 7650″ = 2° 7′ 30″ S. 4.685 4753 T. 7741
76600 = 21 16 40 7660 = 2 7 40 4750 7746
76700 = 21 18 20 7670 = 2 7 50 4748 7751
76800 = 21 20 0 7680 = 2 8 0 4745 7756
76900 = 21 21 40 7690 = 2 8 10 4743 7761

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7700	886 4907	4964	5020	5076	5133	5189	5246	5302	5358	5415	
01	5471	5528	5584	5640	5697	5753	5810	5866	5922	5979	
02	6035	6092	6148	6204	6261	6317	6373	6430	6486	6543	
03	6599	6655	6712	6768	6824	6881	6937	6994	7050	7106	
04	7163	7219	7275	7332	7388	7445	7501	7557	7614	7670	
05	7726	7783	7839	7896	7952	8008	8065	8121	8177	8234	
06	8290	8346	8403	8459	8515	8572	8628	8685	8741	8797	
07	8854	8910	8966	9023	9079	9135	9192	9248	9304	9361	
08	9417	9473	9530	9586	9642	9699	9755	9811	9868	9924	
09	9980	0̄037	0̄093	0̄149	0̄206	0̄262	0̄318	0̄375	0̄431	0̄487	
7710	887 0544	0600	0656	0713	0769	0825	0882	0938	0994	1051	
11	1107	1163	1220	1276	1332	1389	1445	1501	1558	1614	57 1 5.7 2 11.4 3 17.1 4 22.8 5 28.5 6 34.2 7 39.9 8 45.6 9 51.3
12	1670	1727	1783	1839	1895	1952	2008	2064	2121	2177	
13	2233	2290	2346	2402	2459	2515	2571	2627	2684	2740	
14	2796	2853	2909	2965	3022	3078	3134	3190	3247	3303	
15	3359	3416	3472	3528	3584	3641	3697	3753	3810	3866	
16	3922	3978	4035	4091	4147	4204	4260	4316	4372	4429	
17	4485	4541	4598	4654	4710	4766	4823	4879	4935	4991	
18	5048	5104	5160	5217	5273	5329	5385	5442	5498	5554	
19	5610	5667	5723	5779	5835	5892	5948	6004	6060	6117	
7720	887 6173	6229	6286	6342	6398	6454	6511	6567	6623	6679	
21	6736	6792	6848	6904	6961	7017	7073	7129	7185	7242	
22	7298	7354	7410	7467	7523	7579	7635	7692	7748	7804	
23	7860	7917	7973	8029	8085	8142	8198	8254	8310	8366	
24	8423	8479	8535	8591	8648	8704	8760	8816	8872	8929	
25	8985	9041	9097	9154	9210	9266	9322	9378	9435	9491	
26	9547	9603	9659	9716	9772	9828	9884	9941	9997	0̄053	
27	888 0109	0165	0222	0278	0334	0390	0446	0503	0559	0615	
28	0671	0727	0784	0840	0896	0952	1008	1064	1121	1177	
29	1233	1289	1345	1402	1458	1514	1570	1626	1683	1739	
7730	888 1795	1851	1907	1963	2020	2076	2132	2188	2244	2301	
31	2357	2413	2469	2525	2581	2638	2694	2750	2806	2862	56 1 5.6 2 11.2 3 16.8 4 22.4 5 28.0 6 33.6 7 39.2 8 44.8 9 50.4
32	2918	2975	3031	3087	3143	3199	3255	3312	3368	3424	
33	3480	3536	3592	3649	3705	3761	3817	3873	3929	3986	
34	4042	4098	4154	4210	4266	4322	4379	4435	4491	4547	
35	4603	4659	4715	4772	4828	4884	4940	4996	5052	5108	
36	5165	5221	5277	5333	5389	5445	5501	5558	5614	5670	
37	5726	5782	5838	5894	5950	6007	6063	6119	6175	6231	
38	6287	6343	6400	6456	6512	6568	6624	6680	6736	6792	
39	6848	6905	6961	7017	7073	7129	7185	7241	7297	7353	
7740	888 7410	7466	7522	7578	7634	7690	7746	7802	7858	7915	
41	7971	8027	8083	8139	8195	8251	8307	8363	8419	8476	
42	8532	8588	8644	8700	8756	8812	8868	8924	8980	9037	
43	9093	9149	9205	9261	9317	9373	9429	9485	9541	9597	
44	9653	9710	9766	9822	9878	9934	9990	0̄046	0̄102	0̄158	
45	889 0214	0270	0326	0382	0439	0495	0551	0607	0663	0719	
46	0775	0831	0887	0943	0999	1055	1111	1167	1223	1279	
47	1336	1392	1448	1504	1560	1616	1672	1728	1784	1840	
48	1896	1952	2008	2064	2120	2176	2232	2288	2345	2401	
49	2457	2513	2569	2625	2681	2737	2793	2849	2905	2961	
7750	889 3017	3073	3129	3185	3241	3297	3353	3409	3465	3521	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

77000″ = 21° 23′ 20″	7700″ = 2° 8′ 20″	S. 4.685 4740	T. 7767
77100 = 21 25 0	7710 = 2 8 30	4737	7772
77200 = 21 26 40	7720 = 2 8 40	4735	7777
77300 = 21 28 20	7730 = 2 8 50	4732	7782
77400 = 21 30 0	7740 = 2 9 0	4729	7788

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7750	889 3017	3073	3129	3185	3241	3297	3353	3409	3465	3521	
51	3577	3633	3689	3745	3801	3858	3914	3970	4026	4082	
52	4138	4194	4250	4306	4362	4418	4474	4530	4586	4642	
53	4698	4754	4810	4866	4922	4978	5034	5090	5146	5202	
54	5258	5314	5370	5426	5482	5538	5594	5650	5706	5762	
55	5818	5874	5930	5986	6042	6098	6154	6210	6266	6322	
56	6378	6434	6490	6546	6602	6658	6714	6770	6826	6882	
57	6938	6994	7050	7106	7162	7218	7274	7330	7386	7442	
58	7498	7554	7610	7666	7722	7778	7834	7890	7946	8002	
59	8058	8113	8169	8225	8281	8337	8393	8449	8505	8561	
7760	889 8617	8673	8729	8785	8841	8897	8953	9009	9065	9121	
61	9177	9233	9289	9345	9401	9457	9513	9569	9624	9680	56 1 5.6 2 11.2 3 16.8 4 22.4 5 28.0 6 33.6 7 39.2 8 44.8 9 50.4
62	9736	9792	9848	9904	9960	0̄016	0̄072	0̄128	0̄184	0̄240	
63	890 0296	0352	0408	0464	0520	0576	0632	0687	0743	0799	
64	0855	0911	0967	1023	1079	1135	1191	1247	1303	1359	
65	1415	1471	1526	1582	1638	1694	1750	1806	1862	1918	
66	1974	2030	2086	2142	2198	2253	2309	2365	2421	2477	
67	2533	2589	2645	2701	2757	2813	2869	2924	2980	3036	
68	3092	3148	3204	3260	3316	3372	3428	3484	3539	3595	
69	3651	3707	3763	3819	3875	3931	3987	4043	4098	4154	
7770	890 4210	4266	4322	4378	4434	4490	4546	4601	4657	4713	
71	4769	4825	4881	4937	4993	5049	5104	5160	5216	5272	
72	5328	5384	5440	5496	5551	5607	5663	5719	5775	5831	
73	5887	5943	5998	6054	6110	6166	6222	6278	6334	6389	
74	6445	6501	6557	6613	6669	6725	6781	6836	6892	6948	
75	7004	7060	7116	7172	7227	7283	7339	7395	7451	7507	
76	7563	7618	7674	7730	7786	7842	7898	7953	8009	8065	
77	8121	8177	8233	8289	8344	8400	8456	8512	8568	8624	
78	8679	8735	8791	8847	8903	8959	9014	9070	9126	9182	
79	9238	9294	9349	9405	9461	9517	9573	9629	9684	9740	
7780	890 9796	9852	9908	9963	0̄019	0̄075	0̄131	0̄187	0̄243	0̄298	
81	891 0354	0410	0466	0522	0577	0633	0689	0745	0801	0856	55 1 5.5 2 11.0 3 16.5 4 22.0 5 27.5 6 33.0 7 38.5 8 44.0 9 49.5
82	0912	0968	1024	1080	1135	1191	1247	1303	1359	1415	
83	1470	1526	1582	1638	1694	1749	1805	1861	1917	1972	
84	2028	2084	2140	2196	2251	2307	2363	2419	2475	2530	
85	2586	2642	2698	2754	2809	2865	2921	2977	3032	3088	
86	3144	3200	3256	3311	3367	3423	3479	3534	3590	3646	
87	3702	3758	3813	3869	3925	3981	4036	4092	4148	4204	
88	4259	4315	4371	4427	4482	4538	4594	4650	4706	4761	
89	4817	4873	4929	4984	5040	5096	5152	5207	5263	5319	
7790	891 5375	5430	5486	5542	5598	5653	5709	5765	5821	5876	
91	5932	5988	6044	6099	6155	6211	6266	6322	6378	6434	
92	6489	6545	6601	6657	6712	6768	6824	6880	6935	6991	
93	7047	7102	7158	7214	7270	7325	7381	7437	7493	7548	
94	7604	7660	7715	7771	7827	7883	7938	7994	8050	8105	
95	8161	8217	8273	8328	8384	8440	8495	8551	8607	8663	
96	8718	8774	8830	8885	8941	8997	9053	9108	9164	9220	
97	9275	9331	9387	9442	9498	9554	9610	9665	9721	9777	
98	9832	9888	9944	9999	0̄055	0̄111	0̄166	0̄222	0̄278	0̄334	
99	892 0389	0445	0501	0556	0612	0668	0723	0779	0835	0890	
7800	892 0946	1002	1057	1113	1169	1224	1280	1336	1391	1447	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

77500″ = 21° 31′ 40″ 7750″ = 2° 9′ 10″ S. 4.685 4727 T. 7793
77600 = 21 33 20 7760 = 2 9 20 4724 7798
77700 = 21 35 0 7770 = 2 9 30 4721 7804
77800 = 21 36 40 7780 = 2 9 40 4719 7809
77900 = 21 38 20 7790 = 2 9 50 4716 7814

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7800	892 0946	1002	1057	1113	1169	1224	1280	1336	1391	1447	
01	1503	1558	1614	1670	1725	1781	1837	1892	1948	2004	
02	2059	2115	2171	2226	2282	2338	2393	2449	2505	2560	
03	2616	2672	2727	2783	2839	2894	2950	3006	3061	3117	
04	3173	3228	3284	3340	3395	3451	3506	3562	3618	3673	
05	3729	3785	3840	3896	3952	4007	4063	4119	4174	4230	
06	4285	4341	4397	4452	4508	4564	4619	4675	4731	4786	
07	4842	4897	4953	5009	5064	5120	5176	5231	5287	5342	
08	5398	5454	5509	5565	5621	5676	5732	5787	5843	5899	
09	5954	6010	6065	6121	6177	6232	6288	6344	6399	6455	
7810	892 6510	6566	6622	6677	6733	6788	6844	6900	6955	7011	
11	7066	7122	7178	7233	7289	7344	7400	7456	7511	7567	56
12	7622	7678	7734	7789	7845	7900	7956	8011	8067	8123	1 5.6
13	8178	8234	8289	8345	8401	8456	8512	8567	8623	8678	2 11.2
14	8734	8790	8845	8901	8956	9012	9068	9123	9179	9234	3 16.8
15	9290	9345	9401	9457	9512	9568	9623	9679	9734	9790	4 22.4
16	9846	9901	9957	0̄012	0̄068	0̄123	0̄179	0̄234	0̄290	0̄346	5 28.0
17	893 0401	0457	0512	0568	0623	0679	0734	0790	0846	0901	6 33.6
18	0957	1012	1068	1123	1179	1234	1290	1345	1401	1457	7 39.2
19	1512	1568	1623	1679	1734	1790	1845	1901	1956	2012	8 44.8 9 50.4
7820	893 2068	2123	2179	2234	2290	2345	2401	2456	2512	2567	
21	2623	2678	2734	2789	2845	2900	2956	3012	3067	3123	
22	3178	3234	3289	3345	3400	3456	3511	3567	3622	3678	
23	3733	3789	3844	3900	3955	4011	4066	4122	4177	4233	
24	4288	4344	4399	4455	4510	4566	4621	4677	4732	4788	
25	4843	4899	4954	5010	5065	5121	5176	5232	5287	5343	
26	5398	5454	5509	5565	5620	5676	5731	5787	5842	5898	
27	5953	6009	6064	6120	6175	6231	6286	6342	6397	6453	
28	6508	6564	6619	6675	6730	6786	6841	6897	6952	7007	
29	7063	7118	7174	7229	7285	7340	7396	7451	7507	7562	
7830	893 7618	7673	7729	7784	7839	7895	7950	8006	8061	8117	
31	8172	8228	8283	8339	8394	8450	8505	8560	8616	8671	55
32	8727	8782	8838	8893	8949	9004	9059	9115	9170	9226	1 5.5
33	9281	9337	9392	9448	9503	9558	9614	9669	9725	9780	2 11.0
34	9836	9891	9947	0̄002	0̄057	0̄113	0̄168	0̄224	0̄279	0̄335	3 16.5
35	894 0390	0445	0501	0556	0612	0667	0723	0778	0833	0889	4 22.0
36	0944	1000	1055	1111	1166	1221	1277	1332	1388	1443	5 27.5
37	1498	1554	1609	1665	1720	1776	1831	1886	1942	1997	6 33.0
38	2053	2108	2163	2219	2274	2330	2385	2440	2496	2551	7 38.5
39	2607	2662	2717	2773	2828	2884	2939	2994	3050	3105	8 44.0 9 49.5
7840	894 3161	3216	3271	3327	3382	3438	3493	3548	3604	3659	
41	3715	3770	3825	3881	3936	3991	4047	4102	4158	4213	
42	4268	4324	4379	4435	4490	4545	4601	4656	4711	4767	
43	4822	4878	4933	4988	5044	5099	5154	5210	5265	5320	
44	5376	5431	5487	5542	5597	5653	5708	5763	5819	5874	
45	5929	5985	6040	6096	6151	6206	6262	6317	6372	6428	
46	6483	6538	6594	6649	6704	6760	6815	6870	6926	6981	
47	7037	7092	7147	7203	7258	7313	7369	7424	7479	7535	
48	7590	7645	7701	7756	7811	7867	7922	7977	8033	8088	
49	8143	8199	8254	8309	8365	8420	8475	8531	8586	8641	
7850	894 8697	8752	8807	8863	8918	8973	9028	9084	9139	9194	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

78000″ = 21°40′ 0″	7800″ = 2°10′ 0″	S. 4.685 4714	T. 7820
78100 = 21 41 40	7810 = 2 10 10	4711	7825
78200 = 21 43 20	7820 = 2 10 20	4708	7830
78300 = 21 45 0	7830 = 2 10 30	4706	7835
78400 = 21 46 40	7840 = 2 10 40	4703	7841

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7850	894 8697	8752	8807	8863	8918	8973	9028	9084	9139	9194	
51	9250	9305	9360	9416	9471	9526	9582	9637	9692	9748	
52	9803	9858	9914	9969	0̄024	0̄079	0̄135	0̄190	0̄245	0̄301	
53	895 0356	0411	0467	0522	0577	0632	0688	0743	0798	0854	
54	0909	0964	1020	1075	1130	1185	1241	1296	1351	1407	
55	1462	1517	1572	1628	1683	1738	1794	1849	1904	1959	
56	2015	2070	2125	2181	2236	2291	2346	2402	2457	2512	
57	2568	2623	2678	2733	2789	2844	2899	2954	3010	3065	
58	3120	3176	3231	3286	3341	3397	3452	3507	3562	3618	
59	3673	3728	3783	3839	3894	3949	4004	4060	4115	4170	
7860	895 4225	4281	4336	4391	4446	4502	4557	4612	4667	4723	
61	4778	4833	4888	4944	4999	5054	5109	5165	5220	5275	56
62	5330	5386	5441	5496	5551	5607	5662	5717	5772	5828	1 5.6
63	5883	5938	5993	6048	6104	6159	6214	6269	6325	6380	2 11.2
64	6435	6490	6545	6601	6656	6711	6766	6822	6877	6932	3 16.8
65	6987	7042	7098	7153	7208	7263	7319	7374	7429	7484	4 22.4
66	7539	7595	7650	7705	7760	7815	7871	7926	7981	8036	5 28.0 6 33.6
67	8092	8147	8202	8257	8312	8368	8423	8478	8533	8588	7 39.2
68	8644	8699	8754	8809	8864	8919	8975	9030	9085	9140	8 44.8
69	9195	9251	9306	9361	9416	9471	9527	9582	9637	9692	9 50.4
7870	895 9747	9803	9858	9913	9968	0̄023	0̄078	0̄134	0̄189	0̄244	
71	896 0299	0354	0409	0465	0520	0575	0630	0685	0741	0796	
72	0851	0906	0961	1016	1072	1127	1182	1237	1292	1347	
73	1403	1458	1513	1568	1623	1678	1733	1789	1844	1899	
74	1954	2009	2064	2120	2175	2230	2285	2340	2395	2450	
75	2506	2561	2616	2671	2726	2781	2837	2892	2947	3002	
76	3057	3112	3167	3222	3278	3333	3388	3443	3498	3553	
77	3608	3664	3719	3774	3829	3884	3939	3994	4050	4105	
78	4160	4215	4270	4325	4380	4435	4491	4546	4601	4656	
79	4711	4766	4821	4876	4931	4987	5042	5097	5152	5207	
7880	896 5262	5317	5372	5428	5483	5538	5593	5648	5703	5758	
81	5813	5868	5923	5979	6034	6089	6144	6199	6254	6309	55
82	6364	6419	6475	6530	6585	6640	6695	6750	6805	6860	1 5.5
83	6915	6970	7025	7081	7136	7191	7246	7301	7356	7411	2 11.0
84	7466	7521	7576	7631	7686	7742	7797	7852	7907	7962	3 16.5
85	8017	8072	8127	8182	8237	8292	8347	8403	8458	8513	4 22.0
86	8568	8623	8678	8733	8788	8843	8898	8953	9008	9063	5 27.5 6 33.0
87	9118	9173	9229	9284	9339	9394	9449	9504	9559	9614	7 38.5
88	9669	9724	9779	9834	9889	9944	9999	0̄054	0̄109	0̄165	8 44.0
89	897 0220	0275	0330	0385	0440	0495	0550	0605	0660	0715	9 49.5
7890	897 0770	0825	0880	0935	0990	1045	1100	1155	1210	1265	
91	1320	1375	1431	1486	1541	1596	1651	1706	1761	1816	
92	1871	1926	1981	2036	2091	2146	2201	2256	2311	2366	
93	2421	2476	2531	2586	2641	2696	2751	2806	2861	2916	
94	2971	3026	3081	3136	3191	3246	3301	3356	3411	3466	
95	3521	3576	3631	3686	3741	3796	3851	3906	3961	4016	
96	4071	4126	4181	4236	4291	4346	4401	4456	4511	4566	
97	4621	4676	4731	4786	4841	4896	4951	5006	5061	5116	
98	5171	5226	5281	5336	5391	5446	5501	5556	5611	5666	
99	5721	5776	5831	5886	5941	5996	6051	6106	6161	6216	
7900	897 6271	6326	6381	6436	6491	6546	6601	6656	6711	6766	
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78500″ = 21° 48′ 20″
78600 = 21 50 0
78700 = 21 51 40
78800 = 21 53 20
78900 = 21 55 0

7850″ = 2° 10′ 50″
7860 = 2 11 0
7870 = 2 11 10
7880 = 2 11 20
7890 = 2 11 30

S. 4.685 4700
4698
4695
4692
4690

T. 7846
7852
7857
7862
7868

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7900	897 6271	6326	6381	6436	6491	6546	6601	6656	6711	6766	
01	6821	6876	6931	6986	7040	7095	7150	7205	7260	7315	
02	7370	7425	7480	7535	7590	7645	7700	7755	7810	7865	
03	7920	7975	8030	8085	8140	8195	8250	8304	8359	8414	
04	8469	8524	8579	8634	8689	8744	8799	8854	8909	8964	
05	9019	9074	9129	9184	9238	9293	9348	9403	9458	9513	
06	9568	9623	9678	9733	9788	9843	9898	9953	0̄008	0̄062	
07	898 0117	0172	0227	0282	0337	0392	0447	0502	0557	0612	
08	0667	0722	0776	0831	0886	0941	0996	1051	1106	1161	
09	1216	1271	1326	1380	1435	1490	1545	1600	1655	1710	
7910	898 1765	1820	1875	1930	1984	2039	2094	2149	2204	2259	
11	2314	2369	2424	2479	2533	2588	2643	2698	2753	2808	55
12	2863	2918	2973	3027	3082	3137	3192	3247	3302	3357	1 5.5
13	3412	3467	3521	3576	3631	3686	3741	3796	3851	3906	2 11.0
14	3960	4015	4070	4125	4180	4235	4290	4345	4399	4454	3 16.5
15	4509	4564	4619	4674	4729	4784	4838	4893	4948	5003	4 22.0
16	5058	5113	5168	5222	5277	5332	5387	5442	5497	5552	5 27.5 6 33.0
17	5606	5661	5716	5771	5826	5881	5936	5990	6045	6100	7 38.5
18	6155	6210	6265	6320	6374	6429	6484	6539	6594	6649	8 44.0
19	6703	6758	6813	6868	6923	6978	7032	7087	7142	7197	9 49.5
7920	898 7252	7307	7361	7416	7471	7526	7581	7636	7690	7745	
21	7800	7855	7910	7965	8019	8074	8129	8184	8239	8294	
22	8348	8403	8458	8513	8568	8622	8677	8732	8787	8842	
23	8897	8951	9006	9061	9116	9171	9225	9280	9335	9390	
24	9445	9499	9554	9609	9664	9719	9774	9828	9883	9938	
25	9993	0̄048	0̄102	0̄157	0̄212	0̄267	0̄321	0̄376	0̄431	0̄486	
26	899 0541	0595	0650	0705	0760	0815	0869	0924	0979	1034	
27	1089	1143	1198	1253	1308	1363	1417	1472	1527	1582	
28	1636	1691	1746	1801	1856	1910	1965	2020	2075	2129	
29	2184	2239	2294	2348	2403	2458	2513	2568	2622	2677	
7930	899 2732	2787	2841	2896	2951	3006	3060	3115	3170	3225	
31	3279	3334	3389	3444	3499	3553	3608	3663	3718	3772	54
32	3827	3882	3937	3991	4046	4101	4156	4210	4265	4320	1 5.4
33	4375	4429	4484	4539	4594	4648	4703	4758	4812	4867	2 10.8
34	4922	4977	5031	5086	5141	5196	5250	5305	5360	5415	3 16.2
35	5469	5524	5579	5634	5688	5743	5798	5852	5907	5962	4 21.6
36	6017	6071	6126	6181	6235	6290	6345	6400	6454	6509	5 27.0 6 32.4
37	6564	6619	6673	6728	6783	6837	6892	6947	7002	7056	7 37.8
38	7111	7166	7220	7275	7330	7384	7439	7494	7549	7603	8 43.2
39	7658	7713	7767	7822	7877	7932	7986	8041	8096	8150	9 48.6
7940	899 8205	8260	8314	8369	8424	8479	8533	8588	8643	8697	
41	8752	8807	8861	8916	8971	9025	9080	9135	9189	9244	
42	9299	9354	9408	9463	9518	9572	9627	9682	9736	9791	
43	9846	9900	9955	0̄010	0̄064	0̄119	0̄174	0̄228	0̄283	0̄338	
44	900 0392	0447	0502	0556	0611	0666	0720	0775	0830	0884	
45	0939	0994	1048	1103	1158	1212	1267	1322	1376	1431	
46	1486	1540	1595	1650	1704	1759	1814	1868	1923	1977	
47	2032	2087	2141	2196	2251	2305	2360	2415	2469	2524	
48	2579	2633	2688	2743	2797	2852	2906	2961	3016	3070	
49	3125	3180	3234	3289	3344	3398	3453	3507	3562	3617	
7950	900 3671	3726	3781	3835	3890	3944	3999	4054	4108	4163	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

		S.	T.
79000″ = 21° 56′ 40″	7900″ = 2° 11′ 40″	S. 4.685 4687	T. 7873
79100 = 21 58 20	7910 = 2 11 50	4684	7878
79200 = 22 0 0	7920 = 2 12 0	4681	7884
79300 = 22 1 40	7930 = 2 12 10	4679	7889
79400 = 22 3 20	7940 = 2 12 20	4676	7895

N.	0	1	2	3	4	5	6	7	8	9	P. P.
7950	900 3671	3726	3781	3835	3890	3944	3999	4054	4108	4163	
51	4218	4272	4327	4381	4436	4491	4545	4600	4654	4709	
52	4764	4818	4873	4928	4982	5037	5091	5146	5201	5255	
53	5310	5364	5419	5474	5528	5583	5637	5692	5747	5801	
54	5856	5910	5965	6020	6074	6129	6183	6238	6293	6347	
55	6402	6456	6511	6566	6620	6675	6729	6784	6839	6893	
56	6948	7002	7057	7112	7166	7221	7275	7330	7384	7439	
57	7494	7548	7603	7657	7712	7766	7821	7876	7930	7985	
58	8039	8094	8148	8203	8258	8312	8367	8421	8476	8530	
59	8585	8640	8694	8749	8803	8858	8912	8967	9022	9076	
7960	900 9131	9185	9240	9294	9349	9403	9458	9513	9567	9622	
61	9676	9731	9785	9840	9894	9949	0̄004	0̄058	0̄113	0̄167	55
62	901 0222	0276	0331	0385	0440	0494	0549	0604	0658	0713	1 5.5
63	0767	0822	0876	0931	0985	1040	1094	1149	1203	1258	2 11.0
64	1313	1367	1422	1476	1531	1585	1640	1694	1749	1803	3 16.5
65	1858	1912	1967	2021	2076	2130	2185	2239	2294	2349	4 22.0
66	2403	2458	2512	2567	2621	2676	2730	2785	2839	2894	5 27.5 6 33.0
67	2948	3003	3057	3112	3166	3221	3275	3330	3384	3439	7 38.5
68	3493	3548	3602	3657	3711	3766	3820	3875	3929	3984	8 44.0
69	4038	4093	4147	4202	4256	4311	4365	4420	4474	4529	9 49.5
7970	901 4583	4638	4692	4747	4801	4856	4910	4965	5019	5074	
71	5128	5183	5237	5292	5346	5401	5455	5509	5564	5618	
72	5673	5727	5782	5836	5891	5945	6000	6054	6109	6163	
73	6218	6272	6327	6381	6436	6490	6544	6599	6653	6708	
74	6762	6817	6871	6926	6980	7035	7089	7144	7198	7252	
75	7307	7361	7416	7470	7525	7579	7634	7688	7743	7797	
76	7851	7906	7960	8015	8069	8124	8178	8233	8287	8341	
77	8396	8450	8505	8559	8614	8668	8723	8777	8831	8886	
78	8940	8995	9049	9104	9158	9212	9267	9321	9376	9430	
79	9485	9539	9594	9648	9702	9757	9811	9866	9920	9974	
7980	902 0029	0083	0138	0192	0247	0301	0355	0410	0464	0519	
81	0573	0628	0682	0736	0791	0845	0900	0954	1008	1063	54
82	1117	1172	1226	1280	1335	1389	1444	1498	1552	1607	1 5.4
83	1661	1716	1770	1824	1879	1933	1988	2042	2096	2151	2 10.8
84	2205	2260	2314	2368	2423	2477	2532	2586	2640	2695	3 16.2
85	2749	2804	2858	2912	2967	3021	3076	3130	3184	3239	4 21.6
86	3293	3347	3402	3456	3511	3565	3619	3674	3728	3782	5 27.0 6 32.4
87	3837	3891	3946	4000	4054	4109	4163	4217	4272	4326	7 37.8
88	4381	4435	4489	4544	4598	4652	4707	4761	4815	4870	8 43.2
89	4924	4979	5033	5087	5142	5196	5250	5305	5359	5413	9 48.6
7990	902 5468	5522	5577	5631	5685	5740	5794	5848	5903	5957	
91	6011	6066	6120	6174	6229	6283	6337	6392	6446	6500	
92	6555	6609	6663	6718	6772	6826	6881	6935	6989	7044	
93	7098	7152	7207	7261	7315	7370	7424	7478	7533	7587	
94	7641	7696	7750	7804	7859	7913	7967	8022	8076	8130	
95	8185	8239	8293	8348	8402	8456	8511	8565	8619	8674	
96	8728	8782	8836	8891	8945	8999	9054	9108	9162	9217	
97	9271	9325	9380	9434	9488	9542	9597	9651	9705	9760	
98	9814	9868	9923	9977	0̄031	0̄085	0̄140	0̄194	0̄248	0̄303	
99	903 0357	0411	0466	0520	0574	0628	0683	0737	0791	0846	
8000	903 0900	0954	1008	1063	1117	1171	1226	1280	1334	1388	
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79500″ = 22° 5′ 0″ 7950″ = 2° 12′ 30″ S. 4.685 4673 T. 7900
79600 = 22 6 40 7960 = 2 12 40 4671 7905
79700 = 22 8 20 7970 = 2 12 50 4668 7911
79800 = 22 10 0 7980 = 2 13 0 4665 7916
79900 = 22 11 40 7990 = 2 13 10 4662 7922

N.	0	1	2	3	4	5	6	7	8	9
8000	903 0900	0954	1008	1063	1117	1171	1226	1280	1334	1388
01	1443	1497	1551	1606	1660	1714	1768	1823	1877	1931
02	1985	2040	2094	2148	2203	2257	2311	2365	2420	2474
03	2528	2582	2637	2691	2745	2799	2854	2908	2962	3017
04	3071	3125	3179	3234	3288	3342	3396	3451	3505	3559
05	3613	3668	3722	3776	3830	3885	3939	3993	4047	4102
06	4156	4210	4264	4319	4373	4427	4481	4536	4590	4644
07	4698	4753	4807	4861	4915	4969	5024	5078	5132	5186
08	5241	5295	5349	5403	5458	5512	5566	5620	5674	5729
09	5783	5837	5891	5946	6000	6054	6108	6163	6217	6271
8010	903 6325	6379	6434	6488	6542	6596	6650	6705	6759	6813
11	6867	6922	6976	7030	7084	7138	7193	7247	7301	7355
12	7409	7464	7518	7572	7626	7680	7735	7789	7843	7897
13	7951	8006	8060	8114	8168	8222	8277	8331	8385	8439
14	8493	8548	8602	8656	8710	8764	8819	8873	8927	8981
15	9035	9089	9144	9198	9252	9306	9360	9415	9469	9523
16	9577	9631	9685	9740	9794	9848	9902	9956	$\bar{0}$010	$\bar{0}$065
17	904 0119	0173	0227	0281	0336	0390	0444	0498	0552	0606
18	0661	0715	0769	0823	0877	0931	0985	1040	1094	1148
19	1202	1256	1310	1365	1419	1473	1527	1581	1635	1690
8020	904 1744	1798	1852	1906	1960	2014	2069	2123	2177	2231
21	2285	2339	2393	2448	2502	2556	2610	2664	2718	2772
22	2827	2881	2935	2989	3043	3097	3151	3206	3260	3314
23	3368	3422	3476	3530	3584	3639	3693	3747	3801	3855
24	3909	3963	4017	4072	4126	4180	4234	4288	4342	4396
25	4450	4505	4559	4613	4667	4721	4775	4829	4883	4937
26	4992	5046	5100	5154	5208	5262	5316	5370	5424	5479
27	5533	5587	5641	5695	5749	5803	5857	5911	5965	6020
28	6074	6128	6182	6236	6290	6344	6398	6452	6506	6560
29	6615	6669	6723	6777	6831	6885	6939	6993	7047	7101
8030	904 7155	7210	7264	7318	7372	7426	7480	7534	7588	7642
31	7696	7750	7804	7858	7913	7967	8021	8075	8129	8183
32	8237	8291	8345	8399	8453	8507	8561	8615	8670	8724
33	8778	8832	8886	8940	8994	9048	9102	9156	9210	9264
34	9318	9372	9426	9480	9534	9589	9643	9697	9751	9805
35	9859	9913	9967	$\bar{0}$021	$\bar{0}$075	$\bar{0}$129	$\bar{0}$183	$\bar{0}$237	$\bar{0}$291	$\bar{0}$345
36	905 0399	0453	0507	0561	0615	0669	0724	0778	0832	0886
37	0940	0994	1048	1102	1156	1210	1264	1318	1372	1426
38	1480	1534	1588	1642	1696	1750	1804	1858	1912	1966
39	2020	2074	2128	2182	2236	2290	2344	2398	2452	2506
8040	905 2560	2615	2669	2723	2777	2831	2885	2939	2993	3047
41	3101	3155	3209	3263	3317	3371	3425	3479	3533	3587
42	3641	3695	3749	3803	3857	3911	3965	4019	4073	4127
43	4181	4235	4289	4343	4397	4451	4505	4559	4613	4667
44	4721	4775	4829	4883	4937	4991	5045	5099	5153	5207
45	5260	5314	5368	5422	5476	5530	5584	5638	5692	5746
46	5800	5854	5908	5962	6016	6070	6124	6178	6232	6286
47	6340	6394	6448	6502	6556	6610	6664	6718	6772	6826
48	6880	6934	6988	7042	7096	7149	7203	7257	7311	7365
49	7419	7473	7527	7581	7635	7689	7743	7797	7851	7905
8050	905 7959	8013	8067	8121	8175	8229	8282	8336	8390	8444
N.	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

P. P.

	55
1	5.5
2	11.0
3	16.5
4	22.0
5	27.5
6	33.0
7	38.5
8	44.0
9	49.5

	54
1	5.4
2	10.8
3	16.2
4	21.6
5	27.0
6	32.4
7	37.8
8	43.2
9	48.6

80000″ = 22° 13′ 20″ 8000″ = 2° 13′ 20″ S. 4.685 4660 T. 7927
80100 = 22 15 0 8010 = 2 13 30 4657 7933
80200 = 22 16 40 8020 = 2 13 40 4654 7938
80300 = 22 18 20 8030 = 2 13 50 4652 7943
80400 = 22 20 0 8040 = 2 14 0 4649 7949

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8050	905 7959	8013	8067	8121	8175	8229	8282	8336	8390	8444	
51	8498	8552	8606	8660	8714	8768	8822	8876	8930	8984	
52	9038	9092	9146	9199	9253	9307	9361	9415	9469	9523	
53	9577	9631	9685	9739	9793	9847	9901	9954	$\overline{0}$008	$\overline{0}$062	
54	906 0116	0170	0224	0278	0332	0386	0440	0494	0548	0602	
55	0655	0709	0763	0817	0871	0925	0979	1033	1087	1141	
56	1195	1248	1302	1356	1410	1464	1518	1572	1626	1680	
57	1734	1788	1841	1895	1949	2003	2057	2111	2165	2219	
58	2273	2327	2380	2434	2488	2542	2596	2650	2704	2758	
59	2812	2865	2919	2973	3027	3081	3135	3189	3243	3297	
8060	906 3350	3404	3458	3512	3566	3620	3674	3728	3781	3835	
61	3889	3943	3997	4051	4105	4159	4212	4266	4320	4374	54 1 5.4 2 10.8 3 16.2 4 21.6 5 27.0 6 32.4 7 37.8 8 43.2 9 48.6
62	4428	4482	4536	4590	4643	4697	4751	4805	4859	4913	
63	4967	5020	5074	5128	5182	5236	5290	5344	5397	5451	
64	5505	5559	5613	5667	5721	5774	5828	5882	5936	5990	
65	6044	6098	6151	6205	6259	6313	6367	6421	6474	6528	
66	6582	6636	6690	6744	6798	6851	6905	6959	7013	7067	
67	7121	7174	7228	7282	7336	7390	7444	7497	7551	7605	
68	7659	7713	7767	7820	7874	7928	7982	8036	8090	8143	
69	8197	8251	8305	8359	8412	8466	8520	8574	8628	8682	
8070	906 8735	8789	8843	8897	8951	9004	9058	9112	9166	9220	
71	9273	9327	9381	9435	9489	9543	9596	9650	9704	9758	
72	9812	9865	9919	9973	$\overline{0}$027	$\overline{0}$081	$\overline{0}$134	$\overline{0}$188	$\overline{0}$242	$\overline{0}$296	
73	907 0350	0403	0457	0511	0565	0618	0672	0726	0780	0834	
74	0887	0941	0995	1049	1103	1156	1210	1264	1318	1372	
75	1425	1479	1533	1587	1640	1694	1748	1802	1856	1909	
76	1963	2017	2071	2124	2178	2232	2286	2340	2393	2447	
77	2501	2555	2608	2662	2716	2770	2823	2877	2931	2985	
78	3038	3092	3146	3200	3254	3307	3361	3415	3469	3522	
79	3576	3630	3684	3737	3791	3845	3899	3952	4006	4060	
8080	907 4114	4167	4221	4275	4329	4382	4436	4490	4544	4597	
81	4651	4705	4759	4812	4866	4920	4974	5027	5081	5135	53 1 5.3 2 10.6 3 15.9 4 21.2 5 26.5 6 31.8 7 37.1 8 42.4 9 47.7
82	5188	5242	5296	5350	5403	5457	5511	5565	5618	5672	
83	5726	5780	5833	5887	5941	5994	6048	6102	6156	6209	
84	6263	6317	6370	6424	6478	6532	6585	6639	6693	6747	
85	6800	6854	6908	6961	7015	7069	7123	7176	7230	7284	
86	7337	7391	7445	7498	7552	7606	7660	7713	7767	7821	
87	7874	7928	7982	8036	8089	8143	8197	8250	8304	8358	
88	8411	8465	8519	8573	8626	8680	8734	8787	8841	8895	
89	8948	9002	9056	9109	9163	9217	9270	9324	9378	9432	
8090	907 9485	9539	9593	9646	9700	9754	9807	9861	9915	9968	
91	908 0022	0076	0129	0183	0237	0290	0344	0398	0451	0505	
92	0559	0612	0666	0720	0773	0827	0881	0934	0988	1042	
93	1095	1149	1203	1256	1310	1364	1417	1471	1525	1578	
94	1632	1686	1739	1793	1847	1900	1954	2008	2061	2115	
95	2169	2222	2276	2329	2383	2437	2490	2544	2598	2651	
96	2705	2759	2812	2866	2920	2973	3027	3080	3134	3188	
97	3241	3295	3349	3402	3456	3510	3563	3617	3670	3724	
98	3778	3831	3885	3939	3992	4046	4099	4153	4207	4260	
99	4314	4368	4421	4475	4528	4582	4636	4689	4743	4797	
8100	908 4850	4904	4957	5011	5065	5118	5172	5225	5279	5333	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

80500″ = 22° 21′ 40″ 8050″ = 2° 14′ 10″ S. 4.685 4040 1.7954
80600 = 22 23 20 8060 = 2 14 20 4643 7960
80700 = 22 25 0 8070 = 2 14 30 4641 7965
80800 = 22 26 40 8080 = 2 14 40 4638 7971
80900 = 22 28 20 8090 = 2 14 50 4635 7976

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8100	908 4850	4904	4957	5011	5065	5118	5172	5225	5279	5333	
01	5386	5440	5494	5547	5601	5654	5708	5762	5815	5869	
02	5922	5976	6030	6083	6137	6190	6244	6298	6351	6405	
03	6458	6512	6566	6619	6673	6726	6780	6834	6887	6941	
04	6994	7048	7102	7155	7209	7262	7316	7369	7423	7477	
05	7530	7584	7637	7691	7745	7798	7852	7905	7959	8012	
06	8066	8120	8173	8227	8280	8334	8387	8441	8495	8548	
07	8602	8655	8709	8762	8816	8870	8923	8977	9030	9084	
08	9137	9191	9245	9298	9352	9405	9459	9512	9566	9619	
09	9673	9727	9780	9834	9887	9941	9994	0̄048	0̄101	0̄155	
8110	909 0209	0262	0316	0369	0423	0476	0530	0583	0637	0690	
11	0744	0798	0851	0905	0958	1012	1065	1119	1172	1226	54
12	1279	1333	1386	1440	1494	1547	1601	1654	1708	1761	1 5.4
13	1815	1868	1922	1975	2029	2082	2136	2189	2243	2297	2 10.8
14	2350	2404	2457	2511	2564	2618	2671	2725	2778	2832	3 16.2
15	2885	2939	2992	3046	3099	3153	3206	3260	3313	3367	4 21.6
16	3420	3474	3527	3581	3634	3688	3741	3795	3848	3902	5 27.0 6 32.4
17	3955	4009	4062	4116	4169	4223	4276	4330	4383	4437	7 37.8
18	4490	4544	4597	4651	4704	4758	4811	4865	4918	4972	8 43.2
19	5025	5079	5132	5186	5239	5293	5346	5400	5453	5507	9 48.6
8120	909 5560	5614	5667	5721	5774	5828	5881	5935	5988	6042	
21	6095	6149	6202	6256	6309	6362	6416	6469	6523	6576	
22	6630	6683	6737	6790	6844	6897	6951	7004	7058	7111	
23	7165	7218	7271	7325	7378	7432	7485	7539	7592	7646	
24	7699	7753	7806	7860	7913	7966	8020	8073	8127	8180	
25	8234	8287	8341	8394	8447	8501	8554	8608	8661	8715	
26	8768	8822	8875	8929	8982	9035	9089	9142	9196	9249	
27	9303	9356	9409	9463	9516	9570	9623	9677	9730	9784	
28	9837	9890	9944	9997	0̄051	0̄104	0̄158	0̄211	0̄264	0̄318	
29	910 0371	0425	0478	0532	0585	0638	0692	0745	0799	0852	
8130	910 0905	0959	1012	1066	1119	1173	1226	1279	1333	1386	
31	1440	1493	1546	1600	1653	1707	1760	1813	1867	1920	53
32	1974	2027	2081	2134	2187	2241	2294	2348	2401	2454	1 5.3
33	2508	2561	2615	2668	2721	2775	2828	2882	2935	2988	2 10.6
34	3042	3095	3148	3202	3255	3309	3362	3415	3469	3522	3 15.9
35	3576	3629	3682	3736	3789	3842	3896	3949	4003	4056	4 21.2
36	4109	4163	4216	4270	4323	4376	4430	4483	4536	4590	5 26.5 6 31.8
37	4643	4697	4750	4803	4857	4910	4963	5017	5070	5123	7 37.1
38	5177	5230	5284	5337	5390	5444	5497	5550	5604	5657	8 42.4
39	5710	5764	5817	5871	5924	5977	6031	6084	6137	6191	9 47.7
8140	910 6244	6297	6351	6404	6457	6511	6564	6618	6671	6724	
41	6778	6831	6884	6938	6991	7044	7098	7151	7204	7258	
42	7311	7364	7418	7471	7524	7578	7631	7684	7738	7791	
43	7844	7898	7951	8004	8058	8111	8164	8218	8271	8324	
44	8378	8431	8484	8538	8591	8644	8698	8751	8804	8858	
45	8911	8964	9018	9071	9124	9177	9231	9284	9337	9391	
46	9444	9497	9551	9604	9657	9711	9764	9817	9871	9924	
47	9977	0̄030	0̄084	0̄137	0̄190	0̄244	0̄297	0̄350	0̄404	0̄457	
48	911 0510	0564	0617	0670	0723	0777	0830	0883	0937	0990	
49	1043	1096	1150	1203	1256	1310	1363	1416	1470	1523	
8150	911 1576	1629	1683	1736	1789	1843	1896	1949	2002	2056	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

81000″ = 22° 30′ 0″ 8100″ = 2° 15′ 0″ S. 4.685 4632 T. 7982
81100 = 22 31 40 8110 = 2 15 10 4630 7987
81200 = 22 33 20 8120 = 2 15 20 4627 7993
81300 = 22 35 0 8130 = 2 15 30 4624 7999
81400 = 22 36 40 8140 = 2 15 40 4621 8004

N.	0	1	2	3	4	5	6	7	8	9
8150	911 1576	1629	1683	1736	1789	1843	1896	1949	2002	2056
51	2109	2162	2215	2269	2322	2375	2429	2482	2535	2588
52	2642	2695	2748	2802	2855	2908	2961	3015	3068	3121
53	3174	3228	3281	3334	3387	3441	3494	3547	3601	3654
54	3707	3760	3814	3867	3920	3973	4027	4080	4133	4186
55	4240	4293	4346	4399	4453	4506	4559	4612	4666	4719
56	4772	4825	4879	4932	4985	5038	5092	5145	5198	5251
57	5305	5358	5411	5464	5518	5571	5624	5677	5731	5784
58	5837	5890	5943	5997	6050	6103	6156	6210	6263	6316
59	6369	6423	6476	6529	6582	6635	6689	6742	6795	6848
8160	911 6902	6955	7008	7061	7114	7168	7221	7274	7327	7381
61	7434	7487	7540	7593	7647	7700	7753	7806	7859	7913
62	7966	8019	8072	8126	8179	8232	8285	8338	8392	8445
63	8498	8551	8604	8658	8711	8764	8817	8870	8924	8977
64	9030	9083	9136	9190	9243	9296	9349	9402	9456	9509
65	9562	9615	9668	9721	9775	9828	9881	9934	9987	$\bar{0}$041
66	912 0094	0147	0200	0253	0306	0360	0413	0466	0519	0572
67	0626	0679	0732	0785	0838	0891	0945	0998	1051	1104
68	1157	1210	1264	1317	1370	1423	1476	1529	1583	1636
69	1689	1742	1795	1848	1902	1955	2008	2061	2114	2167
8170	912 2221	2274	2327	2380	2433	2486	2539	2593	2646	2699
71	2752	2805	2858	2912	2965	3018	3071	3124	3177	3230
72	3284	3337	3390	3443	3496	3549	3602	3656	3709	3762
73	3815	3868	3921	3974	4028	4081	4134	4187	4240	4293
74	4346	4399	4453	4506	4559	4612	4665	4718	4771	4824
75	4878	4931	4984	5037	5090	5143	5196	5249	5303	5356
76	5409	5462	5515	5568	5621	5674	5728	5781	5834	5887
77	5940	5993	6046	6099	6152	6206	6259	6312	6365	6418
78	6471	6524	6577	6630	6683	6737	6790	6843	6896	6949
79	7002	7055	7108	7161	7214	7268	7321	7374	7427	7480
8180	912 7533	7586	7639	7692	7745	7798	7852	7905	7958	8011
81	8064	8117	8170	8223	8276	8329	8382	8436	8489	8542
82	8595	8648	8701	8754	8807	8860	8913	8966	9019	9072
83	9126	9179	9232	9285	9338	9391	9444	9497	9550	9603
84	9656	9709	9762	9815	9868	9922	9975	$\bar{0}$028	$\bar{0}$081	$\bar{0}$134
85	913 0187	0240	0293	0346	0399	0452	0505	0558	0611	0664
86	0717	0770	0824	0877	0930	0983	1036	1089	1142	1195
87	1248	1301	1354	1407	1460	1513	1566	1619	1672	1725
88	1778	1831	1884	1937	1990	2044	2097	2150	2203	2256
89	2309	2362	2415	2468	2521	2574	2627	2680	2733	2786
8190	913 2839	2892	2945	2998	3051	3104	3157	3210	3263	3316
91	3369	3422	3475	3528	3581	3634	3687	3740	3793	3846
92	3899	3952	4005	4058	4111	4165	4218	4271	4324	4377
93	4430	4483	4536	4589	4642	4695	4748	4801	4854	4907
94	4960	5013	5066	5119	5172	5225	5278	5331	5384	5437
95	5490	5543	5596	5649	5702	5755	5808	5861	5914	5967
96	6019	6072	6125	6178	6231	6284	6337	6390	6443	6496
97	6549	6602	6655	6708	6761	6814	6867	6920	6973	7026
98	7079	7132	7185	7238	7291	7344	7397	7450	7503	7556
99	7609	7662	7715	7768	7821	7874	7927	7980	8033	8086
8200	913 8139	8191	8244	8297	8350	8403	8456	8509	8562	8615
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	53
1	5.3
2	10.6
3	15.9
4	21.2
5	26.5
6	31.8
7	37.1
8	42.4
9	47.7

	52
1	5.2
2	10.4
3	15.6
4	20.8
5	26.0
6	31.2
7	36.4
8	41.6
9	46.8

81500″ = 22° 38′ 20″ 8150″ = 2° 15′ 50″ S. 4.685 4619 T. 8010
81600 = 22 40 0 8160 = 2 16 0 4616 8015
81700 = 22 41 40 8170 = 2 16 10 4613 8021
81800 = 22 43 20 8180 = 2 16 20 4610 8026
81900 = 22 45 0 8190 = 2 16 30 4607 8032

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8200	913 8139	8191	8244	8297	8350	8403	8456	8509	8562	8615	
01	8668	8721	8774	8827	8880	8933	8986	9039	9092	9145	
02	9198	9251	9304	9356	9409	9462	9515	9568	9621	9674	
03	9727	9780	9833	9886	9939	9992	0̄045	0̄098	0̄151	0̄204	
04	914 0257	0309	0362	0415	0468	0521	0574	0627	0680	0733	
05	0786	0839	0892	0945	0998	1050	1103	1156	1209	1262	
06	1315	1368	1421	1474	1527	1580	1633	1686	1738	1791	
07	1844	1897	1950	2003	2056	2109	2162	2215	2268	2321	
08	2373	2426	2479	2532	2585	2638	2691	2744	2797	2850	
09	2903	2955	3008	3061	3114	3167	3220	3273	3326	3379	
8210	914 3432	3484	3537	3590	3643	3696	3749	3802	3855	3908	
11	3961	4013	4066	4119	4172	4225	4278	4331	4384	4437	53
12	4489	4542	4595	4648	4701	4754	4807	4860	4912	4965	1 5.3
13	5018	5071	5124	5177	5230	5283	5335	5388	5441	5494	2 10.6
14	5547	5600	5653	5706	5758	5811	5864	5917	5970	6023	3 15.9
15	6076	6129	6181	6234	6287	6340	6393	6446	6499	6551	4 21.2
16	6604	6657	6710	6763	6816	6869	6921	6974	7027	7080	5 26.5 6 31.8
17	7133	7186	7239	7291	7344	7397	7450	7503	7556	7609	7 37.1
18	7661	7714	7767	7820	7873	7926	7978	8031	8084	8137	8 42.4
19	8190	8243	8295	8348	8401	8454	8507	8560	8613	8665	9 47.7
8220	914 8718	8771	8824	8877	8930	8982	9035	9088	9141	9194	
21	9246	9299	9352	9405	9458	9511	9563	9616	9669	9722	
22	9775	9828	9880	9933	9986	0̄039	0̄092	0̄144	0̄197	0̄250	
23	915 0303	0356	0409	0461	0514	0567	0620	0673	0725	0778	
24	0831	0884	0937	0989	1042	1095	1148	1201	1253	1306	
25	1359	1412	1465	1517	1570	1623	1676	1729	1781	1834	
26	1887	1940	1993	2045	2098	2151	2204	2257	2309	2362	
27	2415	2468	2521	2573	2626	2679	2732	2784	2837	2890	
28	2943	2996	3048	3101	3154	3207	3260	3312	3365	3418	
29	3471	3523	3576	3629	3682	3734	3787	3840	3893	3946	
8230	915 3998	4051	4104	4157	4209	4262	4315	4368	4420	4473	
31	4526	4579	4632	4684	4737	4790	4843	4895	4948	5001	52
32	5054	5106	5159	5212	5265	5317	5370	5423	5476	5528	1 5.2
33	5581	5634	5687	5739	5792	5845	5898	5950	6003	6056	2 10.4
34	6109	6161	6214	6267	6320	6372	6425	6478	6531	6583	3 15.6
35	6636	6689	6742	6794	6847	6900	6952	7005	7058	7111	4 20.8
36	7163	7216	7269	7322	7374	7427	7480	7532	7585	7638	5 26.0 6 31.2
37	7691	7743	7796	7849	7902	7954	8007	8060	8112	8165	7 36.4
38	8218	8271	8323	8376	8429	8481	8534	8587	8640	8692	8 41.6
39	8745	8798	8850	8903	8956	9009	9061	9114	9167	9219	9 46.8
8240	915 9272	9325	9378	9430	9483	9536	9588	9641	9694	9746	
41	9799	9852	9905	9957	0̄010	0̄063	0̄115	0̄168	0̄221	0̄273	
42	916 0326	0379	0431	0484	0537	0590	0642	0695	0748	0800	
43	0853	0906	0958	1011	1064	1116	1169	1222	1274	1327	
44	1380	1433	1485	1538	1591	1643	1696	1749	1801	1854	
45	1907	1959	2012	2065	2117	2170	2223	2275	2328	2381	
46	2433	2486	2539	2591	2644	2697	2749	2802	2855	2907	
47	2960	3013	3065	3118	3171	3223	3276	3329	3381	3434	
48	3487	3539	3592	3644	3697	3750	3802	3855	3908	3960	
49	4013	4066	4118	4171	4224	4276	4329	4382	4434	4487	
8250	916 4539	4592	4645	4697	4750	4803	4855	4908	4961	5013	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

82000″ = 22° 46′ 40″ 8200″ = 2° 16′ 40″ S. 4.685 4605 T. 8037
82100 = 22 48 20 8210 = 2 16 50 4602 8043
82200 = 22 50 0 8220 = 2 17 0 4599 8049
82300 = 22 51 40 8230 = 2 17 10 4596 8054
82400 = 22 53 20 8240 = 2 17 20 4593 8060

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8250	916 4539	4592	4645	4697	4750	4803	4855	4908	4961	5013	
51	5066	5119	5171	5224	5276	5329	5382	5434	5487	5540	
52	5592	5645	5697	5750	5803	5855	5908	5961	6013	6066	
53	6118	6171	6224	6276	6329	6382	6434	6487	6539	6592	
54	6645	6697	6750	6802	6855	6908	6960	7013	7066	7118	
55	7171	7223	7276	7329	7381	7434	7486	7539	7592	7644	
56	7697	7749	7802	7855	7907	7960	8012	8065	8118	8170	
57	8223	8275	8328	8381	8433	8486	8538	8591	8644	8696	
58	8749	8801	8854	8907	8959	9012	9064	9117	9169	9222	
59	9275	9327	9380	9432	9485	9538	9590	9643	9695	9748	
8260	916 9800	9853	9906	9958	0̄011	0̄063	0̄116	0̄169	0̄221	0̄274	
61	917 0326	0379	0431	0484	0537	0589	0642	0694	0747	0799	53
62	0852	0904	0957	1010	1062	1115	1167	1220	1272	1325	1 5.3
63	1378	1430	1483	1535	1588	1640	1693	1745	1798	1851	2 10.6
64	1903	1956	2008	2061	2113	2166	2218	2271	2323	2376	3 15.9
65	2429	2481	2534	2586	2639	2691	2744	2796	2849	2901	4 21.2
66	2954	3007	3059	3112	3164	3217	3269	3322	3374	3427	5 26.5 6 31.8
67	3479	3532	3584	3637	3690	3742	3795	3847	3900	3952	7 37.1
68	4005	4057	4110	4162	4215	4267	4320	4372	4425	4477	8 42.4
69	4530	4582	4635	4687	4740	4793	4845	4898	4950	5003	9 47.7
8270	917 5055	5108	5160	5213	5265	5318	5370	5423	5475	5528	
71	5580	5633	5685	5738	5790	5843	5895	5948	6000	6053	
72	6105	6158	6210	6263	6315	6368	6420	6473	6525	6578	
73	6630	6683	6735	6788	6840	6893	6945	6998	7050	7103	
74	7155	7208	7260	7313	7365	7418	7470	7523	7575	7628	
75	7680	7733	7785	7837	7890	7942	7995	8047	8100	8152	
76	8205	8257	8310	8362	8415	8467	8520	8572	8625	8677	
77	8730	8782	8834	8887	8939	8992	9044	9097	9149	9202	
78	9254	9307	9359	9412	9464	9517	9569	9621	9674	9726	
79	9779	9831	9884	9936	9989	0̄041	0̄094	0̄146	0̄198	0̄251	
8280	918 0303	0356	0408	0461	0513	0566	0618	0671	0723	0775	
81	0828	0880	0933	0985	1038	1090	1143	1195	1247	1300	52
82	1352	1405	1457	1510	1562	1614	1667	1719	1772	1824	1 5.2
83	1877	1929	1981	2034	2086	2139	2191	2244	2296	2348	2 10.4
84	2401	2453	2506	2558	2611	2663	2715	2768	2820	2873	3 15.6
85	2925	2978	3030	3082	3135	3187	3240	3292	3344	3397	4 20.8
86	3449	3502	3554	3607	3659	3711	3764	3816	3869	3921	5 26.0 6 31.2
87	3973	4026	4078	4131	4183	4235	4288	4340	4393	4445	7 36.4
88	4497	4550	4602	4655	4707	4759	4812	4864	4917	4969	8 41.6
89	5021	5074	5126	5179	5231	5283	5336	5388	5441	5493	9 46.8
8290	918 5545	5598	5650	5702	5755	5807	5860	5912	5964	6017	
91	6069	6122	6174	6226	6279	6331	6383	6436	6488	6541	
92	6593	6645	6698	6750	6802	6855	6907	6960	7012	7064	
93	7117	7169	7221	7274	7326	7378	7431	7483	7536	7588	
94	7640	7693	7745	7797	7850	7902	7954	8007	8059	8112	
95	8164	8216	8269	8321	8373	8426	8478	8530	8583	8635	
96	8687	8740	8792	8844	8897	8949	9002	9054	9106	9159	
97	9211	9263	9316	9368	9420	9473	9525	9577	9630	9682	
98	9734	9787	9839	9891	9944	9996	0̄048	0̄101	0̄153	0̄205	
99	919 0258	0310	0362	0415	0467	0519	0572	0624	0676	0729	
8300	919 0781	0833	0886	0938	0990	1043	1095	1147	1200	1252	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

82500″ = 22° 55′ 0″	8250″ = 2° 17′ 30″	S. 4.685 4591	T. 8065
82600 = 22 56 40	8260 = 2 17 40	4588	8071
82700 = 22 58 20	8270 = 2 17 50	4585	8077
82800 = 23 0 0	8280 = 2 18 0	4582	8082
82900 = 23 1 40	8290 = 2 18 10	4579	8088

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8300	919 0781	0833	0886	0938	0990	1043	1095	1147	1200	1252	
01	1304	1356	1409	1461	1513	1566	1618	1670	1723	1775	
02	1827	1880	1932	1984	2037	2089	2141	2193	2246	2298	
03	2350	2403	2455	2507	2560	2612	2664	2717	2769	2821	
04	2873	2926	2978	3030	3083	3135	3187	3239	3292	3344	
05	3396	3449	3501	3553	3606	3658	3710	3762	3815	3867	
06	3919	3972	4024	4076	4128	4181	4233	4285	4338	4390	
07	4442	4494	4547	4599	4651	4703	4756	4808	4860	4913	
08	4965	5017	5069	5122	5174	5226	5279	5331	5383	5435	
09	5488	5540	5592	5644	5697	5749	5801	5853	5906	5958	
8310	919 6010	6062	6115	6167	6219	6272	6324	6376	6428	6481	
11	6533	6585	6637	6690	6742	6794	6846	6899	6951	7003	53
12	7055	7108	7160	7212	7264	7317	7369	7421	7473	7526	1 5.3
13	7578	7630	7682	7735	7787	7839	7891	7943	7996	8048	2 10.6
14	8100	8152	8205	8257	8309	8361	8414	8466	8518	8570	3 15.9
15	8623	8675	8727	8779	8831	8884	8936	8988	9040	9093	4 21.2
16	9145	9197	9249	9301	9354	9406	9458	9510	9563	9615	5 26.5
17	9667	9719	9771	9824	9876	9928	9980	$\bar{0}033$	$\bar{0}085$	$\bar{0}137$	6 31.8
18	920 0189	0241	0294	0346	0398	0450	0502	0555	0607	0659	7 37.1
19	0711	0763	0816	0868	0920	0972	1024	1077	1129	1181	8 42.4
8320	920 1233	1285	1338	1390	1442	1494	1546	1599	1651	1703	9 47.7
21	1755	1807	1860	1912	1964	2016	2068	2121	2173	2225	
22	2277	2329	2381	2434	2486	2538	2590	2642	2695	2747	
23	2799	2851	2903	2955	3008	3060	3112	3164	3216	3269	
24	3321	3373	3425	3477	3529	3582	3634	3686	3738	3790	
25	3842	3895	3947	3999	4051	4103	4155	4208	4260	4312	
26	4364	4416	4468	4521	4573	4625	4677	4729	4781	4833	
27	4886	4938	4990	5042	5094	5146	5199	5251	5303	5355	
28	5407	5459	5511	5564	5616	5668	5720	5772	5824	5876	
29	5929	5981	6033	6085	6137	6189	6241	6294	6346	6398	
8330	920 6450	6502	6554	6606	6659	6711	6763	6815	6867	6919	
31	6971	7023	7076	7128	7180	7232	7284	7336	7388	7440	52
32	7493	7545	7597	7649	7701	7753	7805	7857	7910	7962	1 5.2
33	8014	8066	8118	8170	8222	8274	8327	8379	8431	8483	2 10.4
34	8535	8587	8639	8691	8743	8796	8848	8900	8952	9004	3 15.6
35	9056	9108	9160	9212	9264	9317	9369	9421	9473	9525	4 20.8
36	9577	9629	9681	9733	9785	9838	9890	9942	9994	$\bar{0}046$	5 26.0
37	921 0098	0150	0202	0254	0306	0358	0411	0463	0515	0567	6 31.2
38	0619	0671	0723	0775	0827	0879	0931	0983	1036	1088	7 36.4
39	1140	1192	1244	1296	1348	1400	1452	1504	1556	1608	8 41.6
8340	921 1661	1713	1765	1817	1869	1921	1973	2025	2077	2129	9 46.8
41	2181	2233	2285	2337	2389	2442	2494	2546	2598	2650	
42	2702	2754	2806	2858	2910	2962	3014	3066	3118	3170	
43	3222	3274	3327	3379	3431	3483	3535	3587	3639	3691	
44	3743	3795	3847	3899	3951	4003	4055	4107	4159	4211	
45	4263	4315	4367	4420	4472	4524	4576	4628	4680	4732	
46	4784	4836	4888	4940	4992	5044	5096	5148	5200	5252	
47	5304	5356	5408	5460	5512	5564	5616	5668	5720	5772	
48	5824	5876	5928	5980	6032	6085	6137	6189	6241	6293	
49	6345	6397	6449	6501	6553	6605	6657	6709	6761	6813	
8350	921 6865	6917	6969	7021	7073	7125	7177	7229	7281	7333	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

83000″ = 23° 3′ 20″ 8300″ = 2° 18′ 20″ S. 4.685 4577 T. 8094
83100 = 23 5 0 8310 = 2 18 30 4574 8099
83200 = 23 6 40 8320 = 2 18 40 4571 8105
83300 = 23 8 20 8330 = 2 18 50 4568 8111
83400 = 23 10 0 8340 = 2 19 0 4565 8116

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8350	921 6865	6917	6969	7021	7073	7125	7177	7229	7281	7333	
51	7385	7437	7489	7541	7593	7645	7697	7749	7801	7853	
52	7905	7957	8009	8061	8113	8165	8217	8269	8321	8373	
53	8425	8477	8529	8581	8633	8685	8737	8789	8841	8893	
54	8945	8997	9049	9101	9153	9205	9257	9309	9361	9413	
55	9465	9517	9569	9620	9672	9724	9776	9828	9880	9932	
56	9984	0̄036	0̄088	0̄140	0̄192	0̄244	0̄296	0̄348	0̄400	0̄452	
57	922 0504	0556	0608	0660	0712	0764	0816	0868	0920	0972	
58	1024	1076	1128	1180	1232	1283	1335	1387	1439	1491	
59	1543	1595	1647	1699	1751	1803	1855	1907	1959	2011	
8360	922 2063	2115	2167	2219	2271	2323	2374	2426	2478	2530	
61	2582	2634	2686	2738	2790	2842	2894	2946	2998	3050	52
62	3102	3154	3206	3257	3309	3361	3413	3465	3517	3569	1 5.2
63	3621	3673	3725	3777	3829	3881	3933	3984	4036	4088	2 10.4
64	4140	4192	4244	4296	4348	4400	4452	4504	4556	4608	3 15.6
65	4659	4711	4763	4815	4867	4919	4971	5023	5075	5127	4 20.8
66	5179	5231	5282	5334	5386	5438	5490	5542	5594	5646	5 26.0 6 31.2
67	5698	5750	5801	5853	5905	5957	6009	6061	6113	6165	7 36.4
68	6217	6269	6321	6372	6424	6476	6528	6580	6632	6684	8 41.6
69	6736	6788	6839	6891	6943	6995	7047	7099	7151	7203	9 46.8
8370	922 7255	7306	7358	7410	7462	7514	7566	7618	7670	7722	
71	7773	7825	7877	7929	7981	8033	8085	8137	8188	8240	
72	8292	8344	8396	8448	8500	8552	8603	8655	8707	8759	
73	8811	8863	8915	8967	9018	9070	9122	9174	9226	9278	
74	9330	9381	9433	9485	9537	9589	9641	9693	9744	9796	
75	9848	9900	9952	0̄004	0̄056	0̄107	0̄159	0̄211	0̄263	0̄315	
76	923 0367	0419	0470	0522	0574	0626	0678	0730	0781	0833	
77	0885	0937	0989	1041	1093	1144	1196	1248	1300	1352	
78	1404	1455	1507	1559	1611	1663	1715	1766	1818	1870	
79	1922	1974	2026	2077	2129	2181	2233	2285	2337	2388	
8380	923 2440	2492	2544	2596	2647	2699	2751	2803	2855	2907	
81	2958	3010	3062	3114	3166	3217	3269	3321	3373	3425	51
82	3477	3528	3580	3632	3684	3736	3787	3839	3891	3943	1 5.1
83	3995	4046	4098	4150	4202	4254	4305	4357	4409	4461	2 10.2
84	4513	4564	4616	4668	4720	4772	4823	4875	4927	4979	3 15.3
85	5031	5082	5134	5186	5238	5290	5341	5393	5445	5497	4 20.4
86	5549	5600	5652	5704	5756	5808	5859	5911	5963	6015	5 25.5 6 30.6
87	6066	6118	6170	6222	6274	6325	6377	6429	6481	6532	7 35.7
88	6584	6636	6688	6740	6791	6843	6895	6947	6998	7050	8 40.8
89	7102	7154	7205	7257	7309	7361	7413	7464	7516	7568	9 45.9
8390	923 7620	7671	7723	7775	7827	7878	7930	7982	8034	8085	
91	8137	8189	8241	8292	8344	8396	8448	8499	8551	8603	
92	8655	8707	8758	8810	8862	8913	8965	9017	9069	9120	
93	9172	9224	9276	9327	9379	9431	9483	9534	9586	9638	
94	9690	9741	9793	9845	9897	9948	0̄000	0̄052	0̄104	0̄155	
95	924 0207	0259	0310	0362	0414	0466	0517	0569	0621	0673	
96	0724	0776	0828	0879	0931	0983	1035	1086	1138	1190	
97	1242	1293	1345	1397	1448	1500	1552	1604	1655	1707	
98	1759	1810	1862	1914	1966	2017	2069	2121	2172	2224	
99	2276	2328	2379	2431	2483	2534	2586	2638	2689	2741	
8400	924 2793	2845	2896	2948	3000	3051	3103	3155	3206	3258	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

83500″ = 23° 11′ 40″	8350″ = 2° 19′ 10″	S. 4.685 4562	T. 8122
83600 = 23 13 20	8360 = 2 19 20	4560	8128
83700 = 23 15 0	8370 = 2 19 30	4557	8133
83800 = 23 16 40	8380 = 2 19 40	4554	8139
83900 = 23 18 20	8390 = 2 19 50	4551	8145

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8400	924 2793	2845	2896	2948	3000	3051	3103	3155	3206	3258	
01	3310	3362	3413	3465	3517	3568	3620	3672	3723	3775	
02	3827	3878	3930	3982	4034	4085	4137	4189	4240	4292	
03	4344	4395	4447	4499	4550	4602	4654	4705	4757	4809	
04	4860	4912	4964	5015	5067	5119	5170	5222	5274	5326	
05	5377	5429	5481	5532	5584	5636	5687	5739	5791	5842	
06	5894	5946	5997	6049	6101	6152	6204	6255	6307	6359	
07	6410	6462	6514	6565	6617	6669	6720	6772	6824	6875	
08	6927	6979	7030	7082	7134	7185	7237	7289	7340	7392	
09	7444	7495	7547	7598	7650	7702	7753	7805	7857	7908	
8410	924 7960	8012	8063	8115	8167	8218	8270	8321	8373	8425	
11	8476	8528	8580	8631	8683	8734	8786	8838	8889	8941	52 1 5.2 2 10.4 3 15.6 4 20.8 5 26.0 6 31.2 7 36.4 8 41.6 9 46.8
12	8993	9044	9096	9148	9199	9251	9302	9354	9406	9457	
13	9509	9561	9612	9664	9715	9767	9819	9870	9922	9973	
14	925 0025	0077	0128	0180	0232	0283	0335	0386	0438	0490	
15	0541	0593	0644	0696	0748	0799	0851	0902	0954	1006	
16	1057	1109	1160	1212	1264	1315	1367	1418	1470	1522	
17	1573	1625	1676	1728	1780	1831	1883	1934	1986	2038	
18	2089	2141	2192	2244	2296	2347	2399	2450	2502	2554	
19	2605	2657	2708	2760	2811	2863	2915	2966	3018	3069	
8420	925 3121	3172	3224	3276	3327	3379	3430	3482	3534	3585	
21	3637	3688	3740	3791	3843	3895	3946	3998	4049	4101	
22	4152	4204	4256	4307	4359	4410	4462	4513	4565	4616	
23	4668	4720	4771	4823	4874	4926	4977	5029	5080	5132	
24	5184	5235	5287	5338	5390	5441	5493	5544	5596	5648	
25	5699	5751	5802	5854	5905	5957	6008	6060	6111	6163	
26	6215	6266	6318	6369	6421	6472	6524	6575	6627	6678	
27	6730	6781	6833	6885	6936	6988	7039	7091	7142	7194	
28	7245	7297	7348	7400	7451	7503	7554	7606	7657	7709	
29	7761	7812	7864	7915	7967	8018	8070	8121	8173	8224	
8430	925 8276	8327	8379	8430	8482	8533	8585	8636	8688	8739	
31	8791	8842	8894	8945	8997	9048	9100	9151	9203	9254	51 1 5.1 2 10.2 3 15.3 4 20.4 5 25.5 6 30.6 7 35.7 8 40.8 9 45.9
32	9306	9357	9409	9460	9512	9563	9615	9667	9718	9770	
33	9821	9873	9924	9975	0̄027	0̄078	0̄130	0̄181	0̄233	0̄284	
34	926 0336	0387	0439	0490	0542	0593	0645	0696	0748	0799	
35	0851	0902	0954	1005	1057	1108	1160	1211	1263	1314	
36	1366	1417	1469	1520	1572	1623	1675	1726	1778	1829	
37	1880	1932	1983	2035	2086	2138	2189	2241	2292	2344	
38	2395	2447	2498	2550	2601	2653	2704	2755	2807	2858	
39	2910	2961	3013	3064	3116	3167	3219	3270	3322	3373	
8440	926 3424	3476	3527	3579	3630	3682	3733	3785	3836	3888	
41	3939	3990	4042	4093	4145	4196	4248	4299	4351	4402	
42	4453	4505	4556	4608	4659	4711	4762	4814	4865	4916	
43	4968	5019	5071	5122	5174	5225	5277	5328	5379	5431	
44	5482	5534	5585	5637	5688	5739	5791	5842	5894	5945	
45	5997	6048	6099	6151	6202	6254	6305	6357	6408	6459	
46	6511	6562	6614	6665	6716	6768	6819	6871	6922	6974	
47	7025	7076	7128	7179	7231	7282	7333	7385	7436	7488	
48	7539	7590	7642	7693	7745	7796	7847	7899	7950	8002	
49	8053	8105	8156	8207	8259	8310	8362	8413	8464	8516	
8450	926 8567	8618	8670	8721	8773	8824	8875	8927	8978	9030	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

84000″ = 23°20′ 0″ 8400″ = 2°20′ 0″ S. 4.685 4548 T. 8150
84100 = 23 21 40 8410 = 2 20 10 4545 8156
84200 = 23 23 20 8420 = 2 20 20 4542 8162
84300 = 23 25 0 8430 = 2 20 30 4540 8168
84400 = 23 26 40 8440 = 2 20 40 4537 8173

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8450	926 8567	8618	8670	8721	8773	8824	8875	8927	8978	9030	
51	9081	9132	9184	9235	9287	9338	9389	9441	9492	9543	
52	9595	9646	9698	9749	9800	9852	9903	9955	0̄006	0̄057	
53	927 0109	0160	0211	0263	0314	0366	0417	0468	0520	0571	
54	0622	0674	0725	0777	0828	0879	0931	0982	1033	1085	
55	1136	1187	1239	1290	1342	1393	1444	1496	1547	1598	
56	1650	1701	1752	1804	1855	1907	1958	2009	2061	2112	
57	2163	2215	2266	2317	2369	2420	2471	2523	2574	2625	
58	2677	2728	2780	2831	2882	2934	2985	3036	3088	3139	
59	3190	3242	3293	3344	3396	3447	3498	3550	3601	3652	
8460	927 3704	3755	3806	3858	3909	3960	4012	4063	4114	4166	
61	4217	4268	4320	4371	4422	4474	4525	4576	4628	4679	52 1 5.2 2 10.4 3 15.6 4 20.8 5 26.0 6 31.2 7 36.4 8 41.6 9 46.8
62	4730	4782	4833	4884	4935	4987	5038	5089	5141	5192	
63	5243	5295	5346	5397	5449	5500	5551	5603	5654	5705	
64	5757	5808	5859	5910	5962	6013	6064	6116	6167	6218	
65	6270	6321	6372	6424	6475	6526	6577	6629	6680	6731	
66	6783	6834	6885	6937	6988	7039	7090	7142	7193	7244	
67	7296	7347	7398	7449	7501	7552	7603	7655	7706	7757	
68	7808	7860	7911	7962	8014	8065	8116	8167	8219	8270	
69	8321	8373	8424	8475	8526	8578	8629	8680	8732	8783	
8470	927 8834	8885	8937	8988	9039	9090	9142	9193	9244	9296	
71	9347	9398	9449	9501	9552	9603	9654	9706	9757	9808	
72	9859	9911	9962	0̄013	0̄065	0̄116	0̄167	0̄218	0̄270	0̄321	
73	928 0372	0423	0475	0526	0577	0628	0680	0731	0782	0833	
74	0885	0936	0987	1038	1090	1141	1192	1243	1295	1346	
75	1397	1448	1500	1551	1602	1653	1705	1756	1807	1858	
76	1909	1961	2012	2063	2114	2166	2217	2268	2319	2371	
77	2422	2473	2524	2576	2627	2678	2729	2780	2832	2883	
78	2934	2985	3037	3088	3139	3190	3241	3293	3344	3395	
79	3446	3498	3549	3600	3651	3702	3754	3805	3856	3907	
8480	928 3959	4010	4061	4112	4163	4215	4266	4317	4368	4419	
81	4471	4522	4573	4624	4675	4727	4778	4829	4880	4931	51 1 5.1 2 10.2 3 15.3 4 20.4 5 25.5 6 30.6 7 35.7 8 40.8 9 45.9
82	4983	5034	5085	5136	5187	5239	5290	5341	5392	5443	
83	5495	5546	5597	5648	5699	5751	5802	5853	5904	5955	
84	6007	6058	6109	6160	6211	6263	6314	6365	6416	6467	
85	6518	6570	6621	6672	6723	6774	6826	6877	6928	6979	
86	7030	7081	7133	7184	7235	7286	7337	7389	7440	7491	
87	7542	7593	7644	7696	7747	7798	7849	7900	7951	8003	
88	8054	8105	8156	8207	8258	8310	8361	8412	8463	8514	
89	8565	8616	8668	8719	8770	8821	8872	8923	8975	9026	
8490	928 9077	9128	9179	9230	9282	9333	9384	9435	9486	9537	
91	9588	9640	9691	9742	9793	9844	9895	9946	9998	0̄049	
92	929 0100	0151	0202	0253	0304	0356	0407	0458	0509	0560	
93	0611	0662	0714	0765	0816	0867	0918	0969	1020	1071	
94	1123	1174	1225	1276	1327	1378	1429	1480	1532	1583	
95	1634	1685	1736	1787	1838	1889	1941	1992	2043	2094	
96	2145	2196	2247	2298	2350	2401	2452	2503	2554	2605	
97	2656	2707	2758	2810	2861	2912	2963	3014	3065	3116	
98	3167	3218	3269	3321	3372	3423	3474	3525	3576	3627	
99	3678	3729	3780	3832	3883	3934	3985	4036	4087	4138	
8500	929 4189	4240	4291	4343	4394	4445	4496	4547	4598	4649	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

84500″ = 23°28′20″	8450″ = 2°20′50″	S. 4.685 4534	T. 8179
84600 = 23 30 0	8460 = 2 21 0	4531	8185
84700 = 23 31 40	8470 = 2 21 10	4528	8191
84800 = 23 33 20	8480 = 2 21 20	4525	8196
84900 = 23 35 0	8490 = 2 21 30	4522	8202

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8500	929 4189	4240	4291	4343	4394	4445	4496	4547	4598	4649	
01	4700	4751	4802	4853	4905	4956	5007	5058	5109	5160	
02	5211	5262	5313	5364	5415	5466	5517	5569	5620	5671	
03	5722	5773	5824	5875	5926	5977	6028	6079	6130	6181	
04	6233	6284	6335	6386	6437	6488	6539	6590	6641	6692	
05	6743	6794	6845	6896	6947	6998	7050	7101	7152	7203	
06	7254	7305	7356	7407	7458	7509	7560	7611	7662	7713	
07	7764	7815	7866	7917	7969	8020	8071	8122	8173	8224	
08	8275	8326	8377	8428	8479	8530	8581	8632	8683	8734	
09	8785	8836	8887	8938	8989	9040	9091	9142	9194	9245	
8510	929 9296	9347	9398	9449	9500	9551	9602	9653	9704	9755	
11	9806	9857	9908	9959	0̄010	0̄061	0̄112	0̄163	0̄214	0̄265	52
12	930 0316	0367	0418	0469	0520	0571	0622	0673	0724	0775	1 5.2
13	0826	0877	0928	0979	1030	1081	1132	1183	1234	1285	2 10.4
14	1336	1387	1438	1489	1540	1591	1643	1694	1745	1796	3 15.6
15	1847	1898	1949	2000	2051	2102	2153	2204	2255	2306	4 20.8
16	2357	2408	2459	2510	2561	2612	2663	2713	2764	2815	5 26.0 6 31.2
17	2866	2917	2968	3019	3070	3121	3172	3223	3274	3325	7 36.4
18	3376	3427	3478	3529	3580	3631	3682	3733	3784	3835	8 41.6
19	3886	3937	3988	4039	4090	4141	4192	4243	4294	4345	9 46.8
8520	930 4396	4447	4498	4549	4600	4651	4702	4753	4804	4855	
21	4906	4957	5008	5059	5110	5160	5211	5262	5313	5364	
22	5415	5466	5517	5568	5619	5670	5721	5772	5823	5874	
23	5925	5976	6027	6078	6129	6180	6231	6282	6333	6383	
24	6434	6485	6536	6587	6638	6689	6740	6791	6842	6893	
25	6944	6995	7046	7097	7148	7199	7250	7300	7351	7402	
26	7453	7504	7555	7606	7657	7708	7759	7810	7861	7912	
27	7963	8014	8064	8115	8166	8217	8268	8319	8370	8421	
28	8472	8523	8574	8625	8676	8727	8777	8828	8879	8930	
29	8981	9032	9083	9134	9185	9236	9287	9338	9388	9439	
8530	930 9490	9541	9592	9643	9694	9745	9796	9847	9898	9949	
31	9999	0̄050	0̄101	0̄152	0̄203	0̄254	0̄305	0̄356	0̄407	0̄458	51
32	931 0508	0559	0610	0661	0712	0763	0814	0865	0916	0967	1 5.1
33	1017	1068	1119	1170	1221	1272	1323	1374	1425	1475	2 10.2
34	1526	1577	1628	1679	1730	1781	1832	1883	1933	1984	3 15.3
35	2035	2086	2137	2188	2239	2290	2341	2391	2442	2493	4 20.4
36	2544	2595	2646	2697	2748	2798	2849	2900	2951	3002	5 25.5 6 30.6
37	3053	3104	3155	3205	3256	3307	3358	3409	3460	3511	7 35.7
38	3562	3612	3663	3714	3765	3816	3867	3918	3968	4019	8 40.8
39	4070	4121	4172	4223	4274	4324	4375	4426	4477	4528	9 45.9
8540	931 4579	4630	4680	4731	4782	4833	4884	4935	4986	5036	
41	5087	5138	5189	5240	5291	5341	5392	5443	5494	5545	
42	5596	5647	5697	5748	5799	5850	5901	5952	6002	6053	
43	6104	6155	6206	6257	6307	6358	6409	6460	6511	6562	
44	6612	6663	6714	6765	6816	6867	6917	6968	7019	7070	
45	7121	7171	7222	7273	7324	7375	7426	7476	7527	7578	
46	7629	7680	7731	7781	7832	7883	7934	7985	8035	8086	
47	8137	8188	8239	8289	8340	8391	8442	8493	8544	8594	
48	8645	8696	8747	8798	8848	8899	8950	9001	9052	9102	
49	9153	9204	9255	9306	9356	9407	9458	9509	9560	9610	
8550	931 9661	9712	9763	9814	9864	9915	9966	0̄017	0̄067	0̄118	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

85000″ = 23° 36′ 40″ 8500″ = 2° 21′ 40″ S. 4.685 4519 T. 8208
85100 = 23 38 20 8510 = 2 21 50 4517 8214
85200 = 23 40 0 8520 = 2 22 0 4514 8220
85300 = 23 41 40 8530 = 2 22 10 4511 8225
85400 = 23 43 20 8540 = 2 22 20 4508 8231

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8550	931 9661	9712	9763	9814	9864	9915	9966	0̄017	0̄067	0̄118	
51	932 0169	0220	0271	0321	0372	0423	0474	0525	0575	0626	
52	0677	0728	0778	0829	0880	0931	0982	1032	1083	1134	
53	1185	1235	1286	1337	1388	1439	1489	1540	1591	1642	
54	1692	1743	1794	1845	1896	1946	1997	2048	2099	2149	
55	2200	2251	2302	2352	2403	2454	2505	2555	2606	2657	
56	2708	2759	2809	2860	2911	2962	3012	3063	3114	3165	
57	3215	3266	3317	3368	3418	3469	3520	3571	3621	3672	
58	3723	3774	3824	3875	3926	3977	4027	4078	4129	4180	
59	4230	4281	4332	4382	4433	4484	4535	4585	4636	4687	
8560	932 4738	4788	4839	4890	4941	4991	5042	5093	5144	5194	
61	5245	5296	5346	5397	5448	5499	5549	5600	5651	5702	51
62	5752	5803	5854	5904	5955	6006	6057	6107	6158	6209	1 5.1
63	6259	6310	6361	6412	6462	6513	6564	6614	6665	6716	2 10.2
64	6767	6817	6868	6919	6969	7020	7071	7122	7172	7223	3 15.3
65	7274	7324	7375	7426	7476	7527	7578	7629	7679	7730	4 20.4
66	7781	7831	7882	7933	7983	8034	8085	8136	8186	8237	5 25.5 6 30.6
67	8288	8338	8389	8440	8490	8541	8592	8643	8693	8744	7 35.7
68	8795	8845	8896	8947	8997	9048	9099	9149	9200	9251	8 40.8
69	9301	9352	9403	9453	9504	9555	9606	9656	9707	9758	9 45.9
8570	932 9808	9859	9910	9960	0̄011	0̄062	0̄112	0̄163	0̄214	0̄264	
71	933 0315	0366	0416	0467	0518	0568	0619	0670	0720	0771	
72	0822	0872	0923	0974	1024	1075	1126	1176	1227	1278	
73	1328	1379	1430	1480	1531	1582	1632	1683	1733	1784	
74	1835	1885	1936	1987	2037	2088	2139	2189	2240	2291	
75	2341	2392	2443	2493	2544	2595	2645	2696	2746	2797	
76	2848	2898	2949	3000	3050	3101	3152	3202	3253	3303	
77	3354	3405	3455	3506	3557	3607	3658	3709	3759	3810	
78	3860	3911	3962	4012	4063	4114	4164	4215	4265	4316	
79	4367	4417	4468	4519	4569	4620	4670	4721	4772	4822	
8580	933 4873	4923	4974	5025	5075	5126	5177	5227	5278	5328	
81	5379	5430	5480	5531	5581	5632	5683	5733	5784	5834	50
82	5885	5936	5986	6037	6088	6138	6189	6239	6290	6341	1 5.0
83	6391	6442	6492	6543	6594	6644	6695	6745	6796	6846	2 10.0
84	6897	6948	6998	7049	7099	7150	7201	7251	7302	7352	3 15.0
85	7403	7454	7504	7555	7605	7656	7707	7757	7808	7858	4 20.0
86	7909	7959	8010	8061	8111	8162	8212	8263	8313	8364	5 25.0 6 30.0
87	8415	8465	8516	8566	8617	8668	8718	8769	8819	8870	7 35.0
88	8920	8971	9021	9072	9123	9173	9224	9274	9325	9375	8 40.0
89	9426	9477	9527	9578	9628	9679	9729	9780	9831	9881	9 45.0
8590	933 9932	9982	0̄033	0̄083	0̄134	0̄184	0̄235	0̄286	0̄336	0̄387	
91	934 0437	0488	0538	0589	0639	0690	0740	0791	0842	0892	
92	0943	0993	1044	1094	1145	1195	1246	1296	1347	1398	
93	1448	1499	1549	1600	1650	1701	1751	1802	1852	1903	
94	1953	2004	2055	2105	2156	2206	2257	2307	2358	2408	
95	2459	2509	2560	2610	2661	2711	2762	2812	2863	2914	
96	2964	3015	3065	3116	3166	3217	3267	3318	3368	3419	
97	3469	3520	3570	3621	3671	3722	3772	3823	3873	3924	
98	3974	4025	4075	4126	4176	4227	4277	4328	4378	4429	
99	4479	4530	4580	4631	4682	4732	4783	4833	4884	4934	
8600	934 4985	5035	5086	5136	5187	5237	5287	5338	5388	5439	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

85500″ = 23°45′ 0″	8550″ = 2°22′30″	S. 4.685 4505	T. 8237
85600 = 23 46 40	8560 = 2 22 40	4502	8243
85700 = 23 48 20	8570 = 2 22 50	4499	8249
85800 = 23 50 0	8580 = 2 23 0	4496	8255
85900 = 23 51 40	8590 = 2 23 10	4493	8260

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8600	934 4985	5035	5086	5136	5187	5237	5287	5338	5388	5439	
01	5489	5540	5590	5641	5691	5742	5792	5843	5893	5944	
02	5994	6045	6095	6146	6196	6247	6297	6348	6398	6449	
03	6499	6550	6600	6651	6701	6752	6802	6853	6903	6954	
04	7004	7054	7105	7155	7206	7256	7307	7357	7408	7458	
05	7509	7559	7610	7660	7711	7761	7812	7862	7912	7963	
06	8013	8064	8114	8165	8215	8266	8316	8367	8417	8468	
07	8518	8568	8619	8669	8720	8770	8821	8871	8922	8972	
08	9023	9073	9123	9174	9224	9275	9325	9376	9426	9477	
09	9527	9578	9628	9678	9729	9779	9830	9880	9951	9981	
8610	935 0032	0082	0132	0183	0233	0284	0334	0385	0435	0485	
11	0536	0586	0637	0687	0738	0788	0838	0889	0939	0990	51
12	1040	1091	1141	1191	1242	1292	1343	1393	1444	1494	1 5.1
13	1544	1595	1645	1696	1746	1797	1847	1897	1948	1998	2 10.2
14	2049	2099	2150	2200	2250	2301	2351	2402	2452	2502	3 15.3
15	2553	2603	2654	2704	2754	2805	2855	2906	2956	3006	4 20.4
16	3057	3107	3158	3208	3259	3309	3359	3410	3460	3511	5 25.5 6 30.6
17	3561	3611	3662	3712	3763	3813	3863	3914	3964	4015	7 35.7
18	4065	4115	4166	4216	4266	4317	4367	4418	4468	4518	8 40.8
19	4569	4619	4670	4720	4770	4821	4871	4922	4972	5022	9 45.9
8620	935 5073	5123	5173	5224	5274	5325	5375	5425	5476	5526	
21	5576	5627	5677	5728	5778	5828	5879	5929	5979	6030	
22	6080	6131	6181	6231	6282	6332	6382	6433	6483	6533	
23	6584	6634	6685	6735	6785	6836	6886	6936	6987	7037	
24	7087	7138	7188	7239	7289	7339	7390	7440	7490	7541	
25	7591	7641	7692	7742	7792	7843	7893	7943	7994	8044	
26	8095	8145	8195	8246	8296	8346	8397	8447	8497	8548	
27	8598	8648	8699	8749	8799	8850	8900	8950	9001	9051	
28	9101	9152	9202	9252	9303	9353	9403	9454	9504	9554	
29	9605	9655	9705	9756	9806	9856	9907	9957	$\bar{0}007$	$\bar{0}058$	
8630	936 0108	0158	0209	0259	0309	0360	0410	0460	0511	0561	
31	0611	0661	0712	0762	0812	0863	0913	0963	1014	1064	50
32	1114	1165	1215	1265	1316	1366	1416	1466	1517	1567	1 5.0
33	1617	1668	1718	1768	1819	1869	1919	1970	2020	2070	2 10.0
34	2120	2171	2221	2271	2322	2372	2422	2473	2523	2573	3 15.0
35	2623	2674	2724	2774	2825	2875	2925	2975	3026	3076	4 20.0
36	3126	3177	3227	3277	3327	3378	3428	3478	3529	3579	5 25.0 6 30.0
37	3629	3679	3730	3780	3830	3881	3931	3981	4031	4082	7 35.0
38	4132	4182	4233	4283	4333	4383	4434	4484	4534	4584	8 40.0
39	4635	4685	4735	4786	4836	4886	4936	4987	5037	5087	9 45.0
8640	936 5137	5188	5238	5288	5338	5389	5439	5489	5540	5590	
41	5640	5690	5741	5791	5841	5891	5942	5992	6042	6092	
42	6143	6193	6243	6293	6344	6394	6444	6494	6545	6595	
43	6645	6695	6746	6796	6846	6896	6947	6997	7047	7097	
44	7148	7198	7248	7298	7349	7399	7449	7499	7550	7600	
45	7650	7700	7750	7801	7851	7901	7951	8002	8052	8102	
46	8152	8203	8253	8303	8353	8403	8454	8504	8554	8604	
47	8655	8705	8755	8805	8855	8906	8956	9006	9056	9107	
48	9157	9207	9257	9307	9358	9408	9458	9508	9559	9609	
49	9659	9709	9759	9810	9860	9910	9960	$\bar{0}010$	$\bar{0}061$	$\bar{0}111$	
8650	937 0161	0211	0261	0312	0362	0412	0462	0513	0563	0613	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

86000″ = 23° 53′ 20″	8600″ = 2° 23′ 20″	S. 4.685 4490	T. 8266
86100 = 23 55 0	8610 = 2 23 30	4487	8272
86200 = 23 56 40	8620 = 2 23 40	4484	8278
86300 = 23 58 20	8630 = 2 23 50	4482	8284
86400 = 24 0 0	8640 = 2 24 0	4479	8290

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8650	937 0161	0211	0261	0312	0362	0412	0462	0513	0563	0613	
51	0663	0713	0764	0814	0864	0914	0964	1015	1065	1115	
52	1165	1215	1265	1316	1356	1416	1466	1516	1567	1617	
53	1667	1717	1767	1818	1868	1918	1968	2018	2069	2119	
54	2169	2219	2269	2319	2370	2420	2470	2520	2570	2621	
55	2671	2721	2771	2821	2871	2922	2972	3022	3072	3122	
56	3172	3223	3273	3323	3373	3423	3474	3524	3574	3624	
57	3674	3724	3775	3825	3875	3925	3975	4025	4075	4126	
58	4176	4226	4276	4326	4376	4427	4477	4527	4577	4627	
59	4677	4728	4778	4828	4878	4928	4978	5028	5079	5129	
8660	937 5179	5229	5279	5329	5380	5430	5480	5530	5580	5630	
61	5680	5731	5781	5831	5881	5931	5981	6031	6082	6132	50
62	6182	6232	6282	6332	6382	6432	6483	6533	6583	6633	1 5.0
63	6683	6733	6783	6834	6884	6934	6984	7034	7084	7134	2 10.0
64	7184	7235	7285	7335	7385	7435	7485	7535	7585	7636	3 15.0
65	7686	7736	7786	7836	7886	7936	7986	8037	8087	8137	4 20.0
66	8187	8237	8287	8337	8387	8437	8488	8538	8588	8638	5 25.0 6 30.0
67	8688	8738	8788	8838	8888	8939	8989	9039	9089	9139	7 35.0
68	9189	9239	9289	9339	9389	9440	9490	9540	9590	9640	8 40.0
69	9690	9740	9790	9840	9890	9941	9991	$\bar{0}$041	$\bar{0}$091	$\bar{0}$141	9 45.0
8670	938 0191	0241	0291	0341	0391	0441	0492	0542	0592	0642	
71	0692	0742	0792	0842	0892	0942	0992	1042	1093	1143	
72	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	
73	1693	1744	1794	1844	1894	1944	1994	2044	2094	2144	
74	2194	2244	2294	2344	2394	2445	2495	2545	2595	2645	
75	2695	2745	2795	2845	2895	2945	2995	3045	3095	3145	
76	3195	3245	3296	3346	3396	3446	3496	3546	3596	3646	
77	3696	3746	3796	3846	3896	3946	3996	4046	4096	4146	
78	4196	4247	4297	4347	4397	4447	4497	4547	4597	4647	
79	4697	4747	4797	4847	4897	4947	4997	5047	5097	5147	
8680	938 5197	5247	5297	5347	5397	5447	5497	5547	5598	5648	
81	5698	5748	5798	5848	5898	5948	5998	6048	6098	6148	49
82	6198	6248	6298	6348	6398	6448	6498	6548	6598	6648	1 4.9
83	6698	6748	6798	6848	6898	6948	6998	7048	7098	7148	2 9.8
84	7198	7248	7298	7348	7398	7448	7498	7548	7598	7648	3 14.7
85	7698	7748	7798	7848	7898	7948	7998	8048	8098	8148	4 19.6
86	8198	8248	8298	8348	8398	8448	8498	8548	8598	8648	5 24.5 6 29.4
87	8698	8748	8798	8848	8898	8948	8998	9048	9098	9148	7 34.3
88	9198	9248	9298	9348	9398	9448	9498	9548	9598	9648	8 39.2
89	9698	9748	9798	9848	9898	9948	9998	$\bar{0}$048	$\bar{0}$098	$\bar{0}$148	9 44.1
8690	939 0198	0248	0298	0348	0398	0448	0498	0548	0598	0648	
91	0697	0747	0797	0847	0897	0947	0997	1047	1097	1147	
92	1197	1247	1297	1347	1397	1447	1497	1547	1597	1647	
93	1697	1747	1797	1847	1897	1947	1997	2046	2096	2146	
94	2196	2246	2296	2346	2396	2446	2496	2546	2596	2646	
95	2696	2746	2796	2846	2896	2946	2996	3045	3095	3145	
96	3195	3245	3295	3345	3395	3445	3495	3545	3595	3645	
97	3695	3745	3795	3845	3894	3944	3994	4044	4094	4144	
98	4194	4244	4294	4344	4394	4444	4494	4544	4593	4643	
99	4693	4743	4793	4843	4893	4943	4993	5043	5093	5143	
8700	939 5193	5242	5292	5342	5392	5442	5492	5542	5592	5642	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

86500″ = 24° 1′ 40″ 8650″ = 2° 24′ 10″ S. 4.685 4476 T. 8296
86600 = 24 3 20 8660 = 2 24 20 4473 8302
86700 = 24 5 0 8670 = 2 24 30 4470 8307
86800 = 24 6 40 8680 = 2 24 40 4467 8313
86900 = 24 8 20 8690 = 2 24 50 4464 8319

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8700	939 5193	5242	5292	5342	5392	5442	5492	5542	5592	5642	
01	5692	5742	5792	5841	5891	5941	5991	6041	6091	6141	
02	6191	6241	6291	6341	6390	6440	6490	6540	6590	6640	
03	6690	6740	6790	6840	6889	6939	6989	7039	7089	7139	
04	7189	7239	7289	7339	7388	7438	7488	7538	7588	7638	
05	7688	7738	7788	7837	7887	7937	7987	8037	8087	8137	
06	8187	8237	8286	8336	8386	8436	8486	8536	8586	8636	
07	8685	8735	8785	8835	8885	8935	8985	9035	9084	9134	
08	9184	9234	9284	9334	9384	9434	9483	9533	9583	9633	
09	9683	9733	9783	9833	9882	9932	9982	$\bar{0}032$	$\bar{0}082$	$\bar{0}132$	
8710	940 0182	0231	0281	0331	0381	0431	0481	0531	0580	0630	
11	0680	0730	0780	0830	0880	0929	0979	1029	1079	1129	
12	1179	1229	1278	1328	1378	1428	1478	1528	1577	1627	
13	1677	1727	1777	1827	1877	1926	1976	2026	2076	2126	
14	2176	2225	2275	2325	2375	2425	2475	2524	2574	2624	
15	2674	2724	2774	2823	2873	2923	2973	3023	3073	3122	
16	3172	3222	3272	3322	3372	3421	3471	3521	3571	3621	
17	3670	3720	3770	3820	3870	3920	3969	4019	4069	4119	
18	4169	4218	4268	4318	4368	4418	4468	4517	4567	4617	
19	4667	4717	4766	4816	4866	4916	4966	5015	5065	5115	
8720	940 5165	5215	5264	5314	5364	5414	5464	5513	5563	5613	
21	5663	5713	5762	5812	5862	5912	5962	6011	6061	6111	
22	6161	6211	6260	6310	6360	6410	6460	6509	6559	6609	
23	6659	6709	6758	6808	6858	6908	6957	7007	7057	7107	
24	7157	7206	7256	7306	7356	7405	7455	7505	7555	7605	
25	7654	7704	7754	7804	7853	7903	7953	8003	8053	8102	
26	8152	8202	8252	8301	8351	8401	8451	8500	8550	8600	
27	8650	8700	8749	8799	8849	8899	8948	8998	9048	9098	
28	9147	9197	9247	9297	9346	9396	9446	9496	9545	9595	
29	9645	9695	9744	9794	9844	9894	9943	9993	$\bar{0}043$	$\bar{0}093$	
8730	941 0142	0192	0242	0292	0341	0391	0441	0491	0540	0590	
31	0640	0690	0739	0789	0839	0889	0938	0988	1038	1088	
32	1137	1187	1237	1286	1336	1386	1436	1485	1535	1585	
33	1635	1684	1734	1784	1834	1883	1933	1983	2032	2082	
34	2132	2182	2231	2281	2331	2380	2430	2480	2530	2579	
35	2629	2679	2729	2778	2828	2878	2927	2977	3027	3077	
36	3126	3176	3226	3275	3325	3375	3425	3474	3524	3574	
37	3623	3673	3723	3772	3822	3872	3922	3971	4021	4071	
38	4120	4170	4220	4270	4319	4369	4419	4468	4518	4568	
39	4617	4667	4717	4766	4816	4866	4916	4965	5015	5065	
8740	941 5114	5164	5214	5263	5313	5363	5412	5462	5512	5562	
41	5611	5661	5711	5760	5810	5860	5909	5959	6009	6058	
42	6108	6158	6207	6257	6307	6356	6406	6456	6505	6555	
43	6605	6654	6704	6754	6803	6853	6903	6952	7002	7052	
44	7101	7151	7201	7250	7300	7350	7399	7449	7499	7548	
45	7598	7648	7697	7747	7797	7846	7896	7946	7995	8045	
46	8095	8144	8194	8244	8293	8343	8393	8442	8492	8542	
47	8591	8641	8691	8740	8790	8840	8889	8939	8988	9038	
48	9088	9137	9187	9237	9286	9336	9386	9435	9485	9535	
49	9584	9634	9683	9733	9783	9832	9882	9932	9981	$\bar{0}031$	
8750	942 0081	0130	0180	0229	0279	0329	0378	0428	0478	0527	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

	50
1	5.0
2	10.0
3	15.0
4	20.0
5	25.0
6	30.0
7	35.0
8	40.0
9	45.0

	49
1	4.9
2	9.8
3	14.7
4	19.6
5	24.5
6	29.4
7	34.3
8	39.2
9	44.1

87000″ = 24° 10′ 0″	8700″ = 2° 25′ 0″	S. 4.685 4461	T. 8325
87100 = 24 11 40	8710 = 2 25 10	4458	8331
87200 = 24 13 20	8720 = 2 25 20	4455	8337
87300 = 24 15 0	8730 = 2 25 30	4452	8343
87400 = 24 16 40	8740 = 2 25 40	4449	8349

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8750	942 0081	0130	0180	0229	0279	0329	0378	0428	0478	0527	
51	0577	0626	0676	0726	0775	0825	0875	0924	0974	1023	
52	1073	1123	1172	1222	1272	1321	1371	1420	1470	1520	
53	1569	1619	1669	1718	1768	1817	1867	1917	1966	2016	
54	2065	2115	2165	2214	2264	2313	2363	2413	2462	2512	
55	2562	2611	2661	2710	2760	2810	2859	2909	2958	3008	
56	3058	3107	3157	3206	3256	3306	3355	3405	3454	3504	
57	3553	3603	3653	3702	3752	3801	3851	3901	3950	4000	
58	4049	4099	4149	4198	4248	4297	4347	4397	4446	4496	
59	4545	4595	4644	4694	4744	4793	4843	4892	4942	4991	
8760	942 5041	5091	5140	5190	5239	5289	5339	5388	5438	5487	
61	5537	5586	5636	5686	5735	5785	5834	5884	5933	5983	50
62	6032	6082	6132	6181	6231	6280	6330	6379	6429	6479	1 5.0
63	6528	6578	6627	6677	6726	6776	6825	6875	6925	6974	2 10.0
64	7024	7073	7123	7172	7222	7271	7321	7371	7420	7470	3 15.0
65	7519	7569	7618	7668	7717	7767	7816	7866	7916	7965	4 20.0
66	8015	8064	8114	8163	8213	8262	8312	8361	8411	8461	5 25.0 6 30.0
67	8510	8560	8609	8659	8708	8758	8807	8857	8906	8956	7 35.0
68	9005	9055	9104	9154	9204	9253	9303	9352	9402	9451	8 40.0
69	9501	9550	9600	9649	9699	9748	9798	9847	9897	9946	9 45.0
8770	942 9996	0̄045	0̄095	0̄144	0̄194	0̄244	0̄293	0̄343	0̄392	0̄442	
71	943 0491	0541	0590	0640	0689	0739	0788	0838	0887	0937	
72	0986	1036	1085	1135	1184	1234	1283	1333	1382	1432	
73	1481	1531	1580	1630	1679	1729	1778	1828	1877	1927	
74	1976	2026	2075	2125	2174	2224	2273	2323	2372	2422	
75	2471	2521	2570	2620	2669	2719	2768	2818	2867	2917	
76	2966	3016	3065	3115	3164	3214	3263	3313	3362	3412	
77	3461	3510	3560	3609	3659	3708	3758	3807	3857	3906	
78	3956	4005	4055	4104	4154	4203	4253	4302	4352	4401	
79	4450	4500	4549	4599	4648	4698	4747	4797	4846	4896	
8780	943 4945	4995	5044	5094	5143	5192	5242	5291	5341	5390	
81	5440	5489	5539	5588	5638	5687	5737	5786	5835	5885	49
82	5934	5984	6033	6083	6132	6182	6231	6280	6330	6379	1 4.9
83	6429	6478	6528	6577	6627	6676	6726	6775	6824	6874	2 9.8
84	6923	6973	7022	7072	7121	7170	7220	7269	7319	7368	3 14.7
85	7418	7467	7517	7566	7615	7665	7714	7764	7813	7863	4 19.6
86	7912	7961	8011	8060	8110	8159	8209	8258	8307	8357	5 24.5 6 29.4
87	8406	8456	8505	8555	8604	8653	8703	8752	8802	8851	7 34.3
88	8900	8950	8999	9049	9098	9148	9197	9246	9296	9345	8 39.2
89	9395	9444	9493	9543	9592	9642	9691	9741	9790	9839	9 44.1
8790	943 9889	9938	9988	0̄037	0̄086	0̄136	0̄185	0̄235	0̄284	0̄333	
91	944 0383	0432	0482	0531	0580	0630	0679	0729	0778	0827	
92	0877	0926	0976	1025	1074	1124	1173	1223	1272	1321	
93	1371	1420	1470	1519	1568	1618	1667	1716	1766	1815	
94	1865	1914	1963	2013	2062	2112	2161	2210	2260	2309	
95	2358	2408	2457	2507	2556	2605	2655	2704	2753	2803	
96	2852	2902	2951	3000	3050	3099	3148	3198	3247	3297	
97	3346	3395	3445	3494	3543	3593	3642	3691	3741	3790	
98	3840	3889	3938	3988	4037	4086	4136	4185	4234	4284	
99	4333	4383	4432	4481	4531	4580	4629	4679	4728	4777	
8800	944 4827	4876	4925	4975	5024	5073	5123	5172	5222	5271	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

87500″ = 24° 18′ 20″	8750″ = 2° 25′ 50″	S. 4.685 4446	T. 8355
87600 = 24 20 0	8760 = 2 26 0	4443	8361
87700 = 24 21 40	8770 = 2 26 10	4440	8367
87800 = 24 23 20	8780 = 2 26 20	4437	8373
87900 = 24 25 0	8790 = 2 26 30	4434	8379

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8800	944 4827	4876	4925	4975	5024	5073	5123	5172	5222	5271	
01	5320	5370	5419	5468	5518	5567	5616	5666	5715	5764	
02	5814	5863	5912	5962	6011	6060	6110	6159	6208	6258	
03	6307	6356	6406	6455	6504	6554	6603	6652	6702	6751	
04	6800	6850	6899	6948	6998	7047	7096	7146	7195	7244	
05	7294	7343	7392	7442	7491	7540	7590	7639	7688	7737	
06	7787	7836	7885	7935	7984	8033	8083	8132	8181	8231	
07	8280	8329	8379	8428	8477	8527	8576	8625	8674	8724	
08	8773	8822	8872	8921	8970	9020	9069	9118	9167	9217	
09	9266	9315	9365	9414	9463	9513	9562	9611	9660	9710	
8810	944 9759	9808	9858	9907	9956	0̄006	0̄055	0̄104	0̄153	0̄203	
11	945 0252	0301	0351	0400	0449	0498	0548	0597	0646	0696	50
12	0745	0794	0843	0893	0942	0991	1041	1090	1139	1188	1 5.0
13	1238	1287	1336	1386	1435	1484	1533	1583	1632	1681	2 10.0
14	1730	1780	1829	1878	1928	1977	2026	2075	2125	2174	3 15.0
15	2223	2272	2322	2371	2420	2469	2519	2568	2617	2667	4 20.0
16	2716	2765	2814	2864	2913	2962	3011	3061	3110	3159	5 25.0 6 30.0
17	3208	3258	3307	3356	3405	3455	3504	3553	3602	3652	7 35.0
18	3701	3750	3799	3849	3898	3947	3996	4046	4095	4144	8 40.0
19	4193	4243	4292	4341	4390	4440	4489	4538	4587	4637	9 45.0
8820	945 4686	4735	4784	4834	4883	4932	4981	5031	5080	5129	
21	5178	5227	5277	5326	5375	5424	5474	5523	5572	5621	
22	5671	5720	5769	5818	5867	5917	5966	6015	6064	6114	
23	6163	6212	6261	6310	6360	6409	6458	6507	6557	6606	
24	6655	6704	6753	6803	6852	6901	6950	7000	7049	7098	
25	7147	7196	7246	7295	7344	7393	7442	7492	7541	7590	
26	7639	7688	7738	7787	7836	7885	7934	7984	8033	8082	
27	8131	8180	8230	8279	8328	8377	8426	8476	8525	8574	
28	8623	8672	8722	8771	8820	8869	8918	8968	9017	9066	
29	9115	9164	9214	9263	9312	9361	9410	9459	9509	9558	
8830	945 9607	9656	9705	9755	9804	9853	9902	9951	0̄000	0̄050	
31	946 0099	0148	0197	0246	0296	0345	0394	0443	0492	0541	49
32	0591	0640	0689	0738	0787	0836	0886	0935	0984	1033	1 4.9
33	1082	1131	1181	1230	1279	1328	1377	1426	1476	1525	2 9.8
34	1574	1623	1672	1721	1771	1820	1869	1918	1967	2016	3 14.7
35	2066	2115	2164	2213	2262	2311	2360	2410	2459	2508	4 19.6
36	2557	2606	2655	2705	2754	2803	2852	2901	2950	2999	5 24.5 6 29.4
37	3049	3098	3147	3196	3245	3294	3343	3393	3442	3491	7 34.3
38	3540	3589	3638	3687	3737	3786	3835	3884	3933	3982	8 39.2
39	4031	4080	4130	4179	4228	4277	4326	4375	4424	4474	9 44.1
8840	946 4523	4572	4621	4670	4719	4768	4817	4867	4916	4965	
41	5014	5063	5112	5161	5210	5260	5309	5358	5407	5456	
42	5505	5554	5603	5652	5702	5751	5800	5849	5898	5947	
43	5996	6045	6094	6144	6193	6242	6291	6340	6389	6438	
44	6487	6536	6586	6635	6684	6733	6782	6831	6880	6929	
45	6978	7027	7077	7126	7175	7224	7273	7322	7371	7420	
46	7469	7518	7568	7617	7666	7715	7764	7813	7862	7911	
47	7960	8009	8058	8108	8157	8206	8255	8304	8353	8402	
48	8451	8500	8549	8598	8647	8697	8746	8795	8844	8893	
49	8942	8991	9040	9089	9138	9187	9236	9285	9335	9384	
8850	946 9433	9482	9531	9580	9629	9678	9727	9776	9825	9874	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

88000″ = 24° 26′ 40″	8800″ = 2° 26′ 40″	S. 4.685 4431	T. 8385
88100 = 24 28 20	8810 = 2 26 50	4428	8391
88200 = 24 30 0	8820 = 2 27 0	4425	8397
88300 = 24 31 40	8830 = 2 27 10	4422	8403
88400 = 24 33 20	8840 = 2 27 20	4419	8409

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8850	946 9433	9482	9531	9580	9629	9678	9727	9776	9825	9874	
51	9923	9972	0̄022	0̄071	0̄120	0̄169	0̄218	0̄267	0̄316	0̄365	
52	947 0414	0463	0512	0561	0610	0659	0708	0757	0807	0856	
53	0905	0954	1003	1052	1101	1150	1199	1248	1297	1346	
54	1395	1444	1493	1542	1591	1640	1689	1739	1788	1837	
55	1886	1935	1984	2033	2082	2131	2180	2229	2278	2327	
56	2376	2425	2474	2523	2572	2621	2670	2719	2768	2817	
57	2866	2915	2965	3014	3063	3112	3161	3210	3259	3308	
58	3357	3406	3455	3504	3553	3602	3651	3700	3749	3798	
59	3847	3896	3945	3994	4043	4092	4141	4190	4239	4288	
8860	947 4337	4386	4435	4484	4533	4582	4631	4680	4729	4778	
61	4827	4876	4925	4974	5023	5072	5121	5170	5219	5268	49
62	5317	5366	5415	5464	5513	5562	5611	5660	5709	5758	1 4.9
63	5807	5856	5905	5954	6003	6052	6101	6150	6199	6248	2 9.8
64	6297	6346	6395	6444	6493	6542	6591	6640	6689	6738	3 14.7
65	6787	6836	6885	6934	6983	7032	7081	7130	7179	7228	4 19.6
66	7277	7326	7375	7424	7473	7522	7571	7620	7669	7718	5 24.5 6 29.4
67	7767	7816	7865	7914	7963	8012	8061	8110	8159	8208	7 34.3
68	8257	8306	8355	8404	8453	8502	8551	8600	8649	8698	8 39.2
69	8747	8796	8844	8893	8942	8991	9040	9089	9138	9187	9 44.1
8870	947 9236	9285	9334	9383	9432	9481	9530	9579	9628	9677	
71	9726	9775	9824	9873	9922	9971	0̄020	0̄068	0̄117	0̄166	
72	948 0215	0264	0313	0362	0411	0460	0509	0558	0607	0656	
73	0705	0754	0803	0852	0901	0950	0998	1047	1096	1145	
74	1194	1243	1292	1341	1390	1439	1488	1537	1586	1635	
75	1684	1733	1781	1830	1879	1928	1977	2026	2075	2124	
76	2173	2222	2271	2320	2369	2418	2467	2515	2564	2613	
77	2662	2711	2760	2809	2858	2907	2956	3005	3054	3102	
78	3151	3200	3249	3298	3347	3396	3445	3494	3543	3592	
79	3641	3689	3738	3787	3836	3885	3934	3983	4032	4081	
8880	948 4130	4179	4227	4276	4325	4374	4423	4472	4521	4570	
81	4619	4668	4717	4765	4814	4863	4912	4961	5010	5059	48
82	5108	5157	5205	5254	5303	5352	5401	5450	5499	5548	1 4.8
83	5597	5646	5694	5743	5792	5841	5890	5939	5988	6037	2 9.6
84	6085	6134	6183	6232	6281	6330	6379	6428	6477	6525	3 14.4
85	6574	6623	6672	6721	6770	6819	6868	6916	6965	7014	4 19.2
86	7063	7112	7161	7210	7259	7307	7356	7405	7454	7503	5 24.0 6 28.8
87	7552	7601	7650	7698	7747	7796	7845	7894	7943	7992	7 33.6
88	8040	8089	8138	8187	8236	8285	8334	8382	8431	8480	8 38.4
89	8529	8578	8627	8676	8724	8773	8822	8871	8920	8969	9 43.2
8890	948 9018	9066	9115	9164	9213	9262	9311	9360	9408	9457	
91	9506	9555	9604	9653	9701	9750	9799	9848	9897	9946	
92	9995	0̄043	0̄092	0̄141	0̄190	0̄239	0̄288	0̄336	0̄385	0̄434	
93	949 0483	0532	0581	0629	0678	0727	0776	0825	0874	0922	
94	0971	1020	1069	1118	1167	1215	1264	1313	1362	1411	
95	1460	1508	1557	1606	1655	1704	1752	1801	1850	1899	
96	1948	1997	2045	2094	2143	2192	2241	2289	2338	2387	
97	2436	2485	2534	2582	2631	2680	2729	2778	2826	2875	
98	2924	2973	3022	3070	3119	3168	3217	3266	3314	3363	
99	3412	3461	3510	3558	3607	3656	3705	3754	3802	3851	
8900	949 3900	3949	3998	4046	4095	4144	4193	4242	4290	4339	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

88500″ = 24° 35′ 0″ 8850″ = 2° 27′ 30″ S. 4.685 4416 T. 8415
88600 = 24 36 40 8860 = 2 27 40 4413 8421
88700 = 24 38 20 8870 = 2 27 50 4410 8427
88800 = 24 40 0 8880 = 2 28 0 4407 8433
88900 = 24 41 40 8890 = 2 28 10 4404 8439

N.	0	1	2	3	4	5	6	7	8	9	P. P.
8900	949 3900	3949	3998	4046	4095	4144	4193	4242	4290	4339	
01	4388	4437	4486	4534	4583	4632	4681	4730	4778	4827	
02	4876	4925	4973	5022	5071	5120	5169	5217	5266	5315	
03	5364	5413	5461	5510	5559	5608	5656	5705	5754	5803	
04	5852	5900	5949	5998	6047	6095	6144	6193	6242	6290	
05	6339	6388	6437	6486	6534	6583	6632	6681	6729	6778	
06	6827	6876	6924	6973	7022	7071	7119	7168	7217	7266	
07	7315	7363	7412	7461	7510	7558	7607	7656	7705	7753	
08	7802	7851	7900	7948	7997	8046	8095	8143	8192	8241	
09	8290	8338	8387	8436	8485	8533	8582	8631	8680	8728	
8910	949 8777	8826	8875	8923	8972	9021	9069	9118	9167	9216	
11	9264	9313	9362	9411	9459	9508	9557	9606	9654	9703	49
12	9752	9801	9849	9898	9947	9995	$\bar{0}044$	$\bar{0}093$	$\bar{0}142$	$\bar{0}190$	1 4.9
13	950 0239	0288	0337	0385	0434	0483	0531	0580	0629	0678	2 9.8
14	0726	0775	0824	0872	0921	0970	1019	1067	1116	1165	3 14.7
15	1213	1262	1311	1360	1408	1457	1506	1554	1603	1652	4 19.6
16	1701	1749	1798	1847	1895	1944	1993	2042	2090	2139	5 24.5 6 29.4
17	2188	2236	2285	2334	2382	2431	2480	2529	2577	2626	7 34.3
18	2675	2723	2772	2821	2869	2918	2967	3016	3064	3113	8 39.2
19	3162	3210	3259	3308	3356	3405	3454	3502	3551	3600	9 44.1
8920	950 3649	3697	3746	3795	3843	3892	3941	3989	4038	4087	
21	4135	4184	4233	4281	4330	4379	4427	4476	4525	4574	
22	4622	4671	4720	4768	4817	4866	4914	4963	5012	5060	
23	5109	5158	5206	5255	5304	5352	5401	5450	5498	5547	
24	5596	5644	5693	5742	5790	5839	5888	5936	5985	6034	
25	6082	6131	6180	6228	6277	6326	6374	6423	6472	6520	
26	6569	6617	6666	6715	6763	6812	6861	6909	6958	7007	
27	7055	7104	7153	7201	7250	7299	7347	7396	7445	7493	
28	7542	7590	7639	7688	7736	7785	7834	7882	7931	7980	
29	8028	8077	8126	8174	8223	8271	8320	8369	8417	8466	
8930	950 8515	8563	8612	8660	8709	8758	8806	8855	8904	8952	
31	9001	9050	9098	9147	9195	9244	9293	9341	9390	9439	48
32	9487	9536	9584	9633	9682	9730	9779	9827	9876	9925	1 4.8
33	9973	$\bar{0}022$	$\bar{0}071$	$\bar{0}119$	$\bar{0}168$	$\bar{0}216$	$\bar{0}265$	$\bar{0}314$	$\bar{0}362$	$\bar{0}411$	2 9.6
34	951 0459	0508	0557	0605	0654	0703	0751	0800	0848	0897	3 14.4
35	0946	0994	1043	1091	1140	1189	1237	1286	1334	1383	4 19.2
36	1432	1480	1529	1577	1626	1675	1723	1772	1820	1869	5 24.0 6 28.8
37	1918	1966	2015	2063	2112	2161	2209	2258	2306	2355	7 33.6
38	2404	2452	2501	2549	2598	2646	2695	2744	2792	2841	8 38.4
39	2889	2938	2987	3035	3084	3132	3181	3229	3278	3327	9 43.2
8940	951 3375	3424	3472	3521	3569	3618	3667	3715	3764	3812	
41	3861	3910	3958	4007	4055	4104	4152	4201	4250	4298	
42	4347	4395	4444	4492	4541	4589	4638	4687	4735	4784	
43	4832	4881	4929	4978	5027	5075	5124	5172	5221	5269	
44	5318	5366	5415	5464	5512	5561	5609	5658	5706	5755	
45	5803	5852	5901	5949	5998	6046	6095	6143	6192	6240	
46	6289	6337	6386	6435	6483	6532	6580	6629	6677	6726	
47	6774	6823	6871	6920	6969	7017	7066	7114	7163	7211	
48	7260	7308	7357	7405	7454	7502	7551	7599	7648	7697	
49	7745	7794	7842	7891	7939	7988	8036	8085	8133	8182	
8950	951 8230	8279	8327	8376	8424	8473	8521	8570	8619	8667	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

89000″ = 24° 43′ 20″	8900″ = 2° 28′ 20″	S. 4.685 4401	T. 8445
89100 = 24 45 0	8910 = 2 28 30	4398	8451
89200 = 24 46 40	8920 = 2 28 40	4395	8457
89300 = 24 48 20	8930 = 2 28 50	4392	8463
89400 = 24 50 0	8940 = 2 29 0	4389	8469

N.	0	1	2	3	4	5	6	7	8	9
8950	951 8230	8279	8327	8376	8424	8473	8521	8570	8619	8667
51	8716	8764	8813	8861	8910	8958	9007	9055	9104	9152
52	9201	9249	9298	9346	9395	9443	9492	9540	9589	9637
53	9686	9734	9783	9831	9880	9928	9977	0̄025	0̄074	0̄122
54	952 0171	0219	0268	0316	0365	0413	0462	0510	0559	0607
55	0656	0704	0753	0801	0850	0898	0947	0995	1044	1092
56	1141	1189	1238	1286	1335	1383	1432	1480	1529	1577
57	1626	1674	1723	1771	1820	1868	1917	1965	2014	2062
58	2111	2159	2208	2256	2305	2353	2401	2450	2498	2547
59	2595	2644	2692	2741	2789	2838	2886	2935	2983	3032
8960	952 3080	3129	3177	3226	3274	3322	3371	3419	3468	3516
61	3565	3613	3662	3710	3759	3807	3856	3904	3952	4001
62	4049	4098	4146	4195	4243	4292	4340	4389	4437	4486
63	4534	4582	4631	4679	4728	4776	4825	4873	4922	4970
64	5018	5067	5115	5164	5212	5261	5309	5358	5406	5454
65	5503	5551	5600	5648	5697	5745	5794	5842	5890	5939
66	5987	6036	6084	6133	6181	6230	6278	6326	6375	6423
67	6472	6520	6569	6617	6665	6714	6762	6811	6859	6908
68	6956	7004	7053	7101	7150	7198	7247	7295	7343	7392
69	7440	7489	7537	7586	7634	7682	7731	7779	7828	7876
8970	952 7924	7973	8021	8070	8118	8167	8215	8263	8312	8360
71	8409	8457	8505	8554	8602	8651	8699	8747	8796	8844
72	8893	8941	8989	9038	9086	9135	9183	9231	9280	9328
73	9377	9425	9473	9522	9570	9619	9667	9715	9764	9812
74	9861	9909	9957	0̄006	0̄054	0̄103	0̄151	0̄199	0̄248	0̄296
75	953 0345	0393	0441	0490	0538	0587	0635	0683	0732	0780
76	0828	0877	0925	0974	1022	1070	1119	1167	1215	1264
77	1312	1361	1409	1457	1506	1554	1603	1651	1699	1748
78	1796	1844	1893	1941	1989	2038	2086	2135	2183	2231
79	2280	2328	2376	2425	2473	2522	2570	2618	2667	2715
8980	953 2763	2812	2860	2908	2957	3005	3054	3102	3150	3199
81	3247	3295	3344	3392	3440	3489	3537	3585	3634	3682
82	3731	3779	3827	3876	3924	3972	4021	4069	4117	4166
83	4214	4262	4311	4359	4407	4456	4504	4552	4601	4649
84	4697	4746	4794	4842	4891	4939	4987	5036	5084	5132
85	5181	5229	5277	5326	5374	5422	5471	5519	5567	5616
86	5664	5712	5761	5809	5857	5906	5954	6002	6051	6099
87	6147	6196	6244	6292	6341	6389	6437	6486	6534	6582
88	6631	6679	6727	6776	6824	6872	6921	6969	7017	7065
89	7114	7162	7210	7259	7307	7355	7404	7452	7500	7549
8990	953 7597	7645	7694	7742	7790	7838	7887	7935	7983	8032
91	8080	8128	8177	8225	8273	8321	8370	8418	8466	8515
92	8563	8611	8660	8708	8756	8804	8853	8901	8949	8998
93	9046	9094	9143	9191	9239	9287	9336	9384	9432	9481
94	9529	9577	9625	9674	9722	9770	9819	9867	9915	9963
95	954 0012	0060	0108	0157	0205	0253	0301	0350	0398	0446
96	0494	0543	0591	0639	0688	0736	0784	0832	0881	0929
97	0977	1025	1074	1122	1170	1219	1267	1315	1363	1412
98	1460	1508	1556	1605	1653	1701	1749	1798	1846	1894
99	1943	1991	2039	2087	2136	2184	2232	2280	2329	2377
9000	954 2425	2473	2522	2570	2618	2666	2715	2763	2811	2859
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	49
1	4.9
2	9.8
3	14.7
4	19.6
5	24.5
6	29.4
7	34.3
8	39.2
9	44.1

	48
1	4.8
2	9.6
3	14.4
4	19.2
5	24.0
6	28.8
7	33.6
8	38.4
9	43.2

P. P.

89500″ = 24° 51′ 40″ 8950″ = 2° 29′ 10″ S. 4.685 4386 T. 8475
89600 = 24 53 20 8960 = 2 29 20 4383 8482
89700 = 24 55 0 8970 = 2 29 30 4380 8488
89800 = 24 56 40 8980 = 2 29 40 4377 8494
89900 = 24 58 20 8990 = 2 29 50 4374 8500

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9000	954 2425	2473	2522	2570	2618	2666	2715	2763	2811	2859	
01	2908	2956	3004	3052	3101	3149	3197	3245	3294	3342	
02	3390	3438	3487	3535	3583	3631	3680	3728	3776	3824	
03	3873	3921	3969	4017	4065	4114	4162	4210	4258	4307	
04	4355	4403	4451	4500	4548	4596	4644	4692	4741	4789	
05	4837	4885	4934	4982	5030	5078	5127	5175	5223	5271	
06	5319	5368	5416	5464	5512	5561	5609	5657	5705	5753	
07	5802	5850	5898	5946	5994	6043	6091	6139	6187	6236	
08	6284	6332	6380	6428	6477	6525	6573	6621	6669	6718	
09	6766	6814	6862	6910	6959	7007	7055	7103	7152	7200	
9010	954 7248	7296	7344	7393	7441	7489	7537	7585	7634	7682	
11	7730	7778	7826	7874	7923	7971	8019	8067	8115	8164	49
12	8212	8260	8308	8356	8405	8453	8501	8549	8597	8646	1 4.9
13	8694	8742	8790	8838	8886	8935	8983	9031	9079	9127	2 9.8
14	9176	9224	9272	9320	9368	9416	9465	9513	9561	9609	3 14.7
15	9657	9705	9754	9802	9850	9898	9946	9995	0̄043	0̄091	4 19.6
16	955 0139	0187	0235	0284	0332	0380	0428	0476	0524	0573	5 24.5 6 29.4
17	0621	0669	0717	0765	0813	0862	0910	0958	1006	1054	7 34.3
18	1102	1150	1199	1247	1295	1343	1391	1439	1488	1536	8 39.2
19	1584	1632	1680	1728	1776	1825	1873	1921	1969	2017	9 44.1
9020	955 2065	2114	2162	2210	2258	2306	2354	2402	2451	2499	
21	2547	2595	2643	2691	2739	2788	2836	2884	2932	2980	
22	3028	3076	3125	3173	3221	3269	3317	3365	3413	3461	
23	3510	3558	3606	3654	3702	3750	3798	3846	3895	3943	
24	3991	4039	4087	4135	4183	4231	4280	4328	4376	4424	
25	4472	4520	4568	4616	4665	4713	4761	4809	4857	4905	
26	4953	5001	5050	5098	5146	5194	5242	5290	5338	5386	
27	5434	5483	5531	5579	5627	5675	5723	5771	5819	5867	
28	5916	5964	6012	6060	6108	6156	6204	6252	6300	6348	
29	6397	6445	6493	6541	6589	6637	6685	6733	6781	6829	
9030	955 6878	6926	6974	7022	7070	7118	7166	7214	7262	7310	
31	7358	7407	7455	7503	7551	7599	7647	7695	7743	7791	48
32	7839	7887	7935	7984	8032	8080	8128	8176	8224	8272	1 4.8
33	8320	8368	8416	8464	8512	8560	8609	8657	8705	8753	2 9.6
34	8801	8849	8897	8945	8993	9041	9089	9137	9185	9234	3 14.4
35	9282	9330	9378	9426	9474	9522	9570	9618	9666	9714	4 19.2
36	9762	9810	9858	9906	9954	0̄003	0̄051	0̄099	0̄147	0̄195	5 24.0 6 28.8
37	956 0243	0291	0339	0387	0435	0483	0531	0579	0627	0675	7 33.6
38	0723	0771	0819	0868	0916	0964	1012	1060	1108	1156	8 38.4
39	1204	1252	1300	1348	1396	1444	1492	1540	1588	1636	9 43.2
9040	956 1684	1732	1780	1828	1876	1925	1973	2021	2069	2117	
41	2165	2213	2261	2309	2357	2405	2453	2501	2549	2597	
42	2645	2693	2741	2789	2837	2885	2933	2981	3029	3077	
43	3125	3173	3221	3269	3317	3365	3413	3461	3509	3558	
44	3606	3654	3702	3750	3798	3846	3894	3942	3990	4038	
45	4086	4134	4182	4230	4278	4326	4374	4422	4470	4518	
46	4566	4614	4662	4710	4758	4806	4854	4902	4950	4998	
47	5046	5094	5142	5190	5238	5286	5334	5382	5430	5478	
48	5526	5574	5622	5670	5718	5766	5814	5862	5910	5958	
49	6006	6054	6102	6150	6198	6246	6294	6342	6390	6438	
9050	956 6486	6534	6582	6630	6678	6726	6774	6822	6870	6918	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

90000″ = 25° 0′ 0″   9000″ = 2° 30′ 0″   S. 4.685 4371   T. 8506
90100 = 25 1 40   9010 = 2 30 10   4367   8512
90200 = 25 3 20   9020 = 2 30 20   4364   8518
90300 = 25 5 0   9030 = 2 30 30   4361   8524
90400 = 25 6 40   9040 = 2 30 40   4358   8531

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9050	956 6486	6534	6582	6630	6678	6726	6774	6822	6870	6918	
51	6966	7014	7062	7110	7158	7206	7254	7302	7349	7397	
52	7445	7493	7541	7589	7637	7685	7733	7781	7829	7877	
53	7925	7973	8021	8069	8117	8165	8213	8261	8309	8357	
54	8405	8453	8501	8549	8597	8645	8693	8741	8789	8837	
55	8885	8933	8980	9028	9076	9124	9172	9220	9268	9316	
56	9364	9412	9460	9508	9556	9604	9652	9700	9748	9796	
57	9844	9892	9940	9988	0̄035	0̄083	0̄131	0̄179	0̄227	0̄275	
58	957 0323	0371	0419	0467	0515	0563	0611	0659	0707	0755	
59	0803	0851	0898	0946	0994	1042	1090	1138	1186	1234	
9060	957 1282	1330	1378	1426	1474	1522	1570	1618	1665	1713	
61	1761	1809	1857	1905	1953	2001	2049	2097	2145	2193	48 1 | 4.8 2 | 9.6 3 | 14.4 4 | 19.2 5 | 24.0 6 | 28.8 7 | 33.6 8 | 38.4 9 | 43.2
62	2241	2289	2336	2384	2432	2480	2528	2576	2624	2672	
63	2720	2768	2816	2864	2911	2959	3007	3055	3103	3151	
64	3199	3247	3295	3343	3391	3439	3486	3534	3582	3630	
65	3678	3726	3774	3822	3870	3918	3966	4013	4061	4109	
66	4157	4205	4253	4301	4349	4397	4445	4492	4540	4588	
67	4636	4684	4732	4780	4828	4876	4924	4971	5019	5067	
68	5115	5163	5211	5259	5307	5355	5402	5450	5498	5546	
69	5594	5642	5690	5738	5786	5833	5881	5929	5977	6025	
9070	957 6073	6121	6169	6217	6264	6312	6360	6408	6456	6504	
71	6552	6600	6647	6695	6743	6791	6839	6887	6935	6983	
72	7030	7078	7126	7174	7222	7270	7318	7366	7413	7461	
73	7509	7557	7605	7653	7701	7748	7796	7844	7892	7940	
74	7988	8036	8083	8131	8179	8227	8275	8323	8371	8418	
75	8466	8514	8562	8610	8658	8706	8753	8801	8849	8897	
76	8945	8993	9041	9088	9136	9184	9232	9280	9328	9376	
77	9423	9471	9519	9567	9615	9663	9710	9758	9806	9854	
78	9902	9950	9997	0̄045	0̄093	0̄141	0̄189	0̄237	0̄284	0̄332	
79	958 0380	0428	0476	0524	0571	0619	0667	0715	0763	0811	
9080	958 0858	0906	0954	1002	1050	1098	1145	1193	1241	1289	
81	1337	1385	1432	1480	1528	1576	1624	1672	1719	1767	47 1 | 4.7 2 | 9.4 3 | 14.1 4 | 18.8 5 | 23.5 6 | 28.2 7 | 32.9 8 | 37.6 9 | 42.3
82	1815	1863	1911	1958	2006	2054	2102	2150	2198	2245	
83	2293	2341	2389	2437	2484	2532	2580	2628	2676	2723	
84	2771	2819	2867	2915	2962	3010	3058	3106	3154	3202	
85	3249	3297	3345	3393	3441	3488	3536	3584	3632	3680	
86	3727	3775	3823	3871	3919	3966	4014	4062	4110	4157	
87	4205	4253	4301	4349	4396	4444	4492	4540	4588	4635	
88	4683	4731	4779	4827	4874	4922	4970	5018	5065	5113	
89	5161	5209	5257	5304	5352	5400	5448	5495	5543	5591	
9090	958 5639	5687	5734	5782	5830	5878	5925	5973	6021	6069	
91	6117	6164	6212	6260	6308	6355	6403	6451	6499	6547	
92	6594	6642	6690	6738	6785	6833	6881	6929	6976	7024	
93	7072	7120	7167	7215	7263	7311	7358	7406	7454	7502	
94	7549	7597	7645	7693	7741	7788	7836	7884	7932	7979	
95	8027	8075	8123	8170	8218	8266	8314	8361	8409	8457	
96	8505	8552	8600	8648	8695	8743	8791	8839	8886	8934	
97	8982	9030	9077	9125	9173	9221	9268	9316	9364	9412	
98	9459	9507	9555	9603	9650	9698	9746	9793	9841	9889	
99	9937	9984	0̄032	0̄080	0̄128	0̄175	0̄223	0̄271	0̄318	0̄366	
9100	959 0414	0462	0509	0557	0605	0653	0700	0748	0796	0843	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

90500″ = 25° 8′ 20″ 9050″ = 2° 30′ 50″ S. 4.685 4355 T. 8537
90600 = 25 10 0 9060 = 2 31 0 4352 8543
90700 = 25 11 40 9070 = 2 31 10 4349 8549
90800 = 25 13 20 9080 = 2 31 20 4346 8555
90900 = 25 15 0 9090 = 2 31 30 4343 8561

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9100	959 0414	0462	0509	0557	0605	0653	0700	0748	0796	0843	
01	0891	0939	0987	1034	1082	1130	1177	1225	1273	1321	
02	1368	1416	1464	1511	1559	1607	1655	1702	1750	1798	
03	1845	1893	1941	1989	2036	2084	2132	2179	2227	2275	
04	2322	2370	2418	2466	2513	2561	2609	2656	2704	2752	
05	2800	2847	2895	2943	2990	3038	3086	3133	3181	3229	
06	3276	3324	3372	3420	3467	3515	3563	3610	3658	3706	
07	3753	3801	3849	3896	3944	3992	4039	4087	4135	4183	
08	4230	4278	4326	4373	4421	4469	4516	4564	4612	4659	
09	4707	4755	4802	4850	4898	4945	4993	5041	5088	5136	
9110	959 5184	5231	5279	5327	5374	5422	5470	5517	5565	5613	
11	5660	5708	5756	5803	5851	5899	5946	5994	6042	6089	48
12	6137	6185	6232	6280	6328	6375	6423	6471	6518	6566	1 4.8
13	6614	6661	6709	6757	6804	6852	6900	6947	6995	7043	2 9.6
14	7090	7138	7186	7233	7281	7328	7376	7424	7471	7519	3 14.4
15	7567	7614	7662	7710	7757	7805	7853	7900	7948	7996	4 19.2
16	8043	8091	8138	8186	8234	8281	8329	8377	8424	8472	5 24.0 6 28.8
17	8520	8567	8615	8662	8710	8758	8805	8853	8901	8948	7 33.6
18	8996	9044	9091	9139	9186	9234	9282	9329	9377	9425	8 38.4
19	9472	9520	9567	9615	9663	9710	9758	9806	9853	9901	9 43.2
9120	959 9948	9996	0̄044	0̄091	0̄139	0̄186	0̄234	0̄282	0̄329	0̄377	
21	960 0425	0472	0520	0567	0615	0663	0710	0758	0805	0853	
22	0901	0948	0996	1044	1091	1139	1186	1234	1282	1329	
23	1377	1424	1472	1520	1567	1615	1662	1710	1758	1805	
24	1853	1900	1948	1996	2043	2091	2138	2186	2234	2281	
25	2329	2376	2424	2472	2519	2567	2614	2662	2709	2757	
26	2805	2852	2900	2947	2995	3043	3090	3138	3185	3233	
27	3281	3328	3376	3423	3471	3518	3566	3614	3661	3709	
28	3756	3804	3851	3899	3947	3994	4042	4089	4137	4184	
29	4232	4280	4327	4375	4422	4470	4517	4565	4613	4660	
9130	960 4708	4755	4803	4850	4898	4946	4993	5041	5088	5136	
31	5183	5231	5279	5326	5374	5421	5469	5516	5564	5611	47
32	5659	5707	5754	5802	5849	5897	5944	5992	6039	6087	1 4.7
33	6135	6182	6230	6277	6325	6372	6420	6467	6515	6563	2 9.4
34	6610	6658	6705	6753	6800	6848	6895	6943	6990	7038	3 14.1
35	7086	7133	7181	7228	7276	7323	7371	7418	7466	7513	4 18.8
36	7561	7608	7656	7704	7751	7799	7846	7894	7941	7989	5 23.5 6 28.2
37	8036	8084	8131	8179	8226	8274	8321	8369	8416	8464	7 32.9
38	8512	8559	8607	8654	8702	8749	8797	8844	8892	8939	8 37.6
39	8987	9034	9082	9129	9177	9224	9272	9319	9367	9414	9 42.3
9140	960 9462	9509	9557	9605	9652	9700	9747	9795	9842	9890	
41	9937	9985	0̄032	0̄080	0̄127	0̄175	0̄222	0̄270	0̄317	0̄365	
42	961 0412	0460	0507	0555	0602	0650	0697	0745	0792	0840	
43	0887	0935	0982	1030	1077	1125	1172	1220	1267	1315	
44	1362	1410	1457	1505	1552	1600	1647	1695	1742	1790	
45	1837	1885	1932	1980	2027	2075	2122	2170	2217	2264	
46	2312	2359	2407	2454	2502	2549	2597	2644	2692	2739	
47	2787	2834	2882	2929	2977	3024	3072	3119	3167	3214	
48	3262	3309	3357	3404	3451	3499	3546	3594	3641	3689	
49	3736	3784	3831	3879	3926	3974	4021	4069	4116	4163	
9150	961 4211	4258	4306	4353	4401	4448	4496	4543	4591	4638	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

91000″ = 25° 16′ 40″ 9100″ = 2° 31′ 40″ S. 4.685 4340 T. 8568
91100 = 25 18 20 9110 = 2 31 50 4337 8574
91200 = 25 20 0 9120 = 2 32 0 4334 8580
91300 = 25 21 40 9130 = 2 32 10 4330 8586
91400 = 25 23 20 9140 = 2 32 20 4327 8593

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9150	961 4211	4258	4306	4353	4401	4448	4496	4543	4591	4638	
51	4686	4733	4780	4828	4875	4923	4970	5018	5065	5113	
52	5160	5208	5255	5302	5350	5397	5445	5492	5540	5587	
53	5635	5682	5730	5777	5824	5872	5919	5967	6014	6062	
54	6109	6157	6204	6251	6299	6346	6394	6441	6489	6536	
55	6583	6631	6678	6726	6773	6821	6868	6916	6963	7010	
56	7058	7105	7153	7200	7248	7295	7342	7390	7437	7485	
57	7532	7580	7627	7674	7722	7769	7817	7864	7912	7959	
58	8006	8054	8101	8149	8196	8243	8291	8338	8386	8433	
59	8481	8528	8575	8623	8670	8718	8765	8812	8860	8907	
9160	961 8955	9002	9050	9097	9144	9192	9239	9287	9334	9381	
61	9429	9476	9524	9571	9618	9666	9713	9761	9808	9855	48
62	9903	9950	9998	0̄045	0̄092	0̄140	0̄187	0̄235	0̄282	0̄329	1 4.8
63	962 0377	0424	0472	0519	0566	0614	0661	0709	0756	0803	2 9.6
64	0851	0898	0946	0993	1040	1088	1135	1183	1230	1277	3 14.4
65	1325	1372	1419	1467	1514	1562	1609	1656	1704	1751	4 19.2
66	1799	1846	1893	1941	1988	2035	2083	2130	2178	2225	5 24.0 6 28.8
67	2272	2320	2367	2414	2462	2509	2557	2604	2651	2699	7 33.6
68	2746	2793	2841	2888	2936	2983	3030	3078	3125	3172	8 38.4
69	3220	3267	3314	3362	3409	3457	3504	3551	3599	3646	9 43.2
9170	962 3693	3741	3788	3835	3883	3930	3978	4025	4072	4120	
71	4167	4214	4262	4309	4356	4404	4451	4498	4546	4593	
72	4640	4688	4735	4783	4830	4877	4925	4972	5019	5067	
73	5114	5161	5209	5256	5303	5351	5398	5445	5493	5540	
74	5587	5635	5682	5729	5777	5824	5871	5919	5966	6013	
75	6061	6108	6155	6203	6250	6297	6345	6392	6439	6487	
76	6534	6581	6629	6676	6723	6771	6818	6865	6913	6960	
77	7007	7055	7102	7149	7197	7244	7291	7339	7386	7433	
78	7481	7528	7575	7622	7670	7717	7764	7812	7859	7906	
79	7954	8001	8048	8096	8143	8190	8238	8285	8332	8380	
9180	962 8427	8474	8521	8569	8616	8663	8711	8758	8805	8853	
81	8900	8947	8994	9042	9089	9136	9184	9231	9278	9326	47
82	9373	9420	9467	9515	9562	9609	9657	9704	9751	9799	1 4.7
83	9846	9893	9940	9988	0̄035	0̄082	0̄130	0̄177	0̄224	0̄271	2 9.4
84	963 0319	0366	0413	0461	0508	0555	0602	0650	0697	0744	3 14.1
85	0792	0839	0886	0933	0981	1028	1075	1123	1170	1217	4 18.8
86	1264	1312	1359	1406	1454	1501	1548	1595	1643	1690	5 23.5 6 28.2
87	1737	1784	1832	1879	1926	1974	2021	2068	2115	2163	7 32.9
88	2210	2257	2304	2352	2399	2446	2493	2541	2588	2635	8 37.6
89	2683	2730	2777	2824	2872	2919	2966	3013	3061	3108	9 42.3
9190	963 3155	3202	3250	3297	3344	3391	3439	3486	3533	3580	
91	3628	3675	3722	3769	3817	3864	3911	3958	4006	4053	
92	4100	4147	4195	4242	4289	4336	4384	4431	4478	4525	
93	4573	4620	4667	4714	4762	4809	4856	4903	4951	4998	
94	5045	5092	5139	5187	5234	5281	5328	5376	5423	5470	
95	5517	5565	5612	5659	5706	5753	5801	5848	5895	5942	
96	5990	6037	6084	6131	6179	6226	6273	6320	6367	6415	
97	6462	6509	6556	6604	6651	6698	6745	6792	6840	6887	
98	6934	6981	7028	7076	7123	7170	7217	7265	7312	7359	
99	7406	7453	7501	7548	7595	7642	7689	7737	7784	7831	
9200	963 7878	7925	7973	8020	8067	8114	8161	8209	8256	8303	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

91500″ = 25° 25′ 0″	9150″ = 2° 32′ 30″	S. 4.685 4324	T. 8599
91600 = 25 26 40	9160 = 2 32 40	4321	8605
91700 = 25 28 20	9170 = 2 32 50	4318	8611
91800 = 25 30 0	9180 = 2 33 0	4315	8617
91900 = 25 31 40	9190 = 2 33 10	4312	8624

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9200	963 7878	7925	7973	8020	8067	8114	8161	8209	8256	8303	
01	8350	8398	8445	8492	8539	8586	8634	8681	8728	8775	
02	8822	8869	8917	8964	9011	9058	9105	9153	9200	9247	
03	9294	9341	9389	9436	9483	9530	9577	9625	9672	9719	
04	9766	9813	9860	9908	9955	0̄002	0̄049	0̄096	0̄144	0̄191	
05	964 0238	0285	0332	0379	0427	0474	0521	0568	0615	0663	
06	0710	0757	0804	0851	0898	0946	0993	1040	1087	1134	
07	1181	1229	1276	1323	1370	1417	1464	1512	1559	1606	
08	1653	1700	1747	1795	1842	1889	1936	1983	2030	2078	
09	2125	2172	2219	2266	2313	2361	2408	2455	2502	2549	
9210	964 2596	2643	2691	2738	2785	2832	2879	2926	2974	3021	
11	3068	3115	3162	3209	3256	3304	3351	3398	3445	3492	48
12	3539	3586	3634	3681	3728	3775	3822	3869	3916	3964	1 4.8
13	4011	4058	4105	4152	4199	4246	4294	4341	4388	4435	2 9.6
14	4482	4529	4576	4623	4671	4718	4765	4812	4859	4906	3 14.4
15	4953	5001	5048	5095	5142	5189	5236	5283	5330	5378	4 19.2
16	5425	5472	5519	5566	5613	5660	5707	5755	5802	5849	5 24.0 6 28.8
17	5896	5943	5990	6037	6084	6131	6179	6226	6273	6320	7 33.6
18	6367	6414	6461	6508	6555	6603	6650	6697	6744	6791	8 38.4
19	6838	6885	6932	6979	7027	7074	7121	7168	7215	7262	9 43.2
9220	964 7309	7356	7403	7451	7498	7545	7592	7639	7686	7733	
21	7780	7827	7874	7922	7969	8016	8063	8110	8157	8204	
22	8251	8298	8345	8392	8440	8487	8534	8581	8628	8675	
23	8722	8769	8816	8863	8910	8958	9005	9052	9099	9146	
24	9193	9240	9287	9334	9381	9428	9475	9523	9570	9617	
25	9664	9711	9758	9805	9852	9899	9946	9993	0̄040	0̄087	
26	965 0135	0182	0229	0276	0323	0370	0417	0464	0511	0558	
27	0605	0652	0699	0746	0793	0841	0888	0935	0982	1029	
28	1076	1123	1170	1217	1264	1311	1358	1405	1452	1499	
29	1546	1594	1641	1688	1735	1782	1829	1876	1923	1970	
9230	965 2017	2064	2111	2158	2205	2252	2299	2346	2393	2440	
31	2488	2535	2582	2629	2676	2723	2770	2817	2864	2911	47
32	2958	3005	3052	3099	3146	3193	3240	3287	3334	3381	1 4.7
33	3428	3475	3522	3569	3617	3664	3711	3758	3805	3852	2 9.4
34	3899	3946	3993	4040	4087	4134	4181	4228	4275	4322	3 14.1
35	4369	4416	4463	4510	4557	4604	4651	4698	4745	4792	4 18.8
36	4839	4886	4933	4980	5027	5074	5121	5168	5215	5262	5 23.5 6 28.2
37	5309	5356	5403	5450	5497	5545	5592	5639	5686	5733	7 32.9
38	5780	5827	5874	5921	5968	6015	6062	6109	6156	6203	8 37.6
39	6250	6297	6344	6391	6438	6485	6532	6579	6626	6673	9 42.3
9240	965 6720	6767	6814	6861	6908	6955	7002	7049	7096	7143	
41	7190	7237	7284	7331	7378	7425	7472	7519	7566	7613	
42	7660	7707	7754	7801	7848	7895	7942	7989	8036	8083	
43	8130	8177	8224	8270	8317	8364	8411	8458	8505	8552	
44	8599	8646	8693	8740	8787	8834	8881	8928	8975	9022	
45	9069	9116	9163	9210	9257	9304	9351	9398	9445	9492	
46	9539	9586	9633	9680	9727	9774	9821	9868	9915	9962	
47	966 0009	0056	0103	0149	0196	0243	0290	0337	0384	0431	
48	0478	0525	0572	0619	0666	0713	0760	0807	0854	0901	
49	0948	0995	1042	1089	1136	1183	1230	1276	1323	1370	
9250	966 1417	1464	1511	1558	1605	1652	1699	1746	1793	1840	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

92000″ = 25° 33′ 20″	9200″ = 2° 33′ 20″	S. 4.685 4309	T. 8630
92100 = 25 35 0	9210 = 2 33 30	4305	8636
92200 = 25 36 40	9220 = 2 33 40	4302	8643
92300 = 25 38 20	9230 = 2 33 50	4299	8649
92400 = 25 40 0	9240 = 2 34 0	4296	8655

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9250	966 1417	1464	1511	1558	1605	1652	1699	1746	1793	1840	
51	1887	1934	1981	2028	2075	2122	2168	2215	2262	2309	
52	2356	2403	2450	2497	2544	2591	2638	2685	2732	2779	
53	2826	2873	2919	2966	3013	3060	3107	3154	3201	3248	
54	3295	3342	3389	3436	3483	3530	3577	3623	3670	3717	
55	3764	3811	3858	3905	3952	3999	4046	4093	4140	4187	
56	4233	4280	4327	4374	4421	4468	4515	4562	4609	4656	
57	4703	4750	4796	4843	4890	4937	4984	5031	5078	5125	
58	5172	5219	5266	5312	5359	5406	5453	5500	5547	5594	
59	5641	5688	5735	5782	5828	5875	5922	5969	6016	6063	
9260	966 6110	6157	6204	6251	6297	6344	6391	6438	6485	6532	
61	6579	6626	6673	6720	6766	6813	6860	6907	6954	7001	47
62	7048	7095	7142	7188	7235	7282	7329	7376	7423	7470	1 4.7
63	7517	7564	7610	7657	7704	7751	7798	7845	7892	7939	2 9.4
64	7985	8032	8079	8126	8173	8220	8267	8314	8360	8407	3 14.1
65	8454	8501	8548	8595	8642	8689	8735	8782	8829	8876	4 18.8
66	8923	8970	9017	9064	9110	9157	9204	9251	9298	9345	5 23.5 6 28.2
67	9392	9438	9485	9532	9579	9626	9673	9720	9767	9813	7 32.9
68	9860	9907	9954	0̄001	0̄048	0̄095	0̄141	0̄188	0̄235	0̄282	8 37.6
69	967 0329	0376	0423	0469	0516	0563	0610	0657	0704	0750	9 42.3
9270	967 0797	0844	0891	0938	0985	1032	1078	1125	1172	1219	
71	1266	1313	1359	1406	1453	1500	1547	1594	1641	1687	
72	1734	1781	1828	1875	1922	1968	2015	2062	2109	2156	
73	2203	2249	2296	2343	2390	2437	2484	2530	2577	2624	
74	2671	2718	2765	2811	2858	2905	2952	2999	3046	3092	
75	3139	3186	3233	3280	3326	3373	3420	3467	3514	3561	
76	3607	3654	3701	3748	3795	3841	3888	3935	3982	4029	
77	4076	4122	4169	4216	4263	4310	4356	4403	4450	4497	
78	4544	4590	4637	4684	4731	4778	4825	4871	4918	4965	
79	5012	5059	5105	5152	5199	5246	5293	5339	5386	5433	
9280	967 5480	5527	5573	5620	5667	5714	5761	5807	5854	5901	
81	5948	5995	6041	6088	6135	6182	6228	6275	6322	6369	46
82	6416	6462	6509	6556	6603	6650	6696	6743	6790	6837	1 4.6
83	6884	6930	6977	7024	7071	7117	7164	7211	7258	7305	2 9.2
84	7351	7398	7445	7492	7538	7585	7632	7679	7726	7772	3 13.8
85	7819	7866	7913	7959	8006	8053	8100	8146	8193	8240	4 18.4
86	8287	8334	8380	8427	8474	8521	8567	8614	8661	8708	5 23.0 6 27.6
87	8754	8801	8848	8895	8942	8988	9035	9082	9129	9175	7 32.2
88	9222	9269	9316	9362	9409	9456	9503	9549	9596	9643	8 36.8
89	9690	9736	9783	9830	9877	9923	9970	0̄017	0̄064	0̄110	9 41.4
9290	968 0157	0204	0251	0297	0344	0391	0438	0484	0531	0578	
91	0625	0671	0718	0765	0812	0858	0905	0952	0999	1045	
92	1092	1139	1185	1232	1279	1326	1372	1419	1466	1513	
93	1559	1606	1653	1700	1746	1793	1840	1886	1933	1980	
94	2027	2073	2120	2167	2214	2260	2307	2354	2400	2447	
95	2494	2541	2587	2634	2681	2728	2774	2821	2868	2914	
96	2961	3008	3055	3101	3148	3195	3241	3288	3335	3382	
97	3428	3475	3522	3568	3615	3662	3709	3755	3802	3849	
98	3895	3942	3989	4036	4082	4129	4176	4222	4269	4316	
99	4362	4409	4456	4503	4549	4596	4643	4689	4736	4783	
9300	968 4829	4876	4923	4970	5016	5063	5110	5156	5203	5250	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

92500″ = 25° 41′ 40″ 9250″ = 2° 34′ 10″ S. 4.685 4293 T. 8661
92600 = 25 43 20 9260 = 2 34 20 4290 8668
92700 = 25 45 0 9270 = 2 34 30 4287 8674
92800 = 25 46 40 9280 = 2 34 40 4283 8680
92900 = 25 48 20 9290 = 2 34 50 4280 8687

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9300	968 4829	4876	4923	4970	5016	5063	5110	5156	5203	5250	
01	5296	5343	5390	5437	5483	5530	5577	5623	5670	5717	
02	5763	5810	5857	5903	5950	5997	6043	6090	6137	6184	
03	6230	6277	6324	6370	6417	6464	6510	6557	6604	6650	
04	6697	6744	6790	6837	6884	6930	6977	7024	7070	7117	
05	7164	7210	7257	7304	7350	7397	7444	7490	7537	7584	
06	7630	7677	7724	7770	7817	7864	7910	7957	8004	8050	
07	8097	8144	8190	8237	8284	8330	8377	8424	8470	8517	
08	8564	8610	8657	8704	8750	8797	8844	8890	8937	8984	
09	9030	9077	9124	9170	9217	9264	9310	9357	9404	9450	
9310	968 9497	9543	9590	9637	9683	9730	9777	9823	9870	9917	
11	9963	0̄010	0̄057	0̄103	0̄150	0̄196	0̄243	0̄290	0̄336	0̄383	
12	969 0430	0476	0523	0570	0616	0663	0709	0756	0803	0849	47
13	0896	0943	0989	1036	1083	1129	1176	1222	1269	1316	1 4.7
14	1362	1409	1456	1502	1549	1595	1642	1689	1735	1782	2 9.4
15	1829	1875	1922	1968	2015	2062	2108	2155	2202	2248	3 14.1
16	2295	2341	2388	2435	2481	2528	2574	2621	2668	2714	4 18.8
17	2761	2808	2854	2901	2947	2994	3041	3087	3134	3180	5 23.5
18	3227	3274	3320	3367	3413	3460	3507	3553	3600	3647	6 28.2
19	3693	3740	3786	3833	3880	3926	3973	4019	4066	4113	7 32.9
9320	969 4159	4206	4252	4299	4346	4392	4439	4485	4532	4578	8 37.6
21	4625	4672	4718	4765	4811	4858	4905	4951	4998	5044	9 42.3
22	5091	5138	5184	5231	5277	5324	5371	5417	5464	5510	
23	5557	5603	5650	5697	5743	5790	5836	5883	5929	5976	
24	6023	6069	6116	6162	6209	6256	6302	6349	6395	6442	
25	6488	6535	6582	6628	6675	6721	6768	6814	6861	6908	
26	6954	7001	7047	7094	7140	7187	7234	7280	7327	7373	
27	7420	7466	7513	7559	7606	7653	7699	7746	7792	7839	
28	7885	7932	7978	8025	8072	8118	8165	8211	8258	8304	
29	8351	8397	8444	8491	8537	8584	8630	8677	8723	8770	
9330	969 8816	8863	8910	8956	9003	9049	9096	9142	9189	9235	
31	9282	9328	9375	9422	9468	9515	9561	9608	9654	9701	
32	9747	9794	9840	9887	9933	9980	0̄027	0̄073	0̄120	0̄166	46
33	970 0213	0259	0306	0352	0399	0445	0492	0538	0585	0631	1 4.6
34	0678	0724	0771	0818	0864	0911	0957	1004	1050	1097	2 9.2
35	1143	1190	1236	1283	1329	1376	1422	1469	1515	1562	3 13.8
36	1608	1655	1701	1748	1794	1841	1888	1934	1981	2027	4 18.4
37	2074	2120	2167	2213	2260	2306	2353	2399	2446	2492	5 23.0
38	2539	2585	2632	2678	2725	2771	2818	2864	2911	2957	6 27.6
39	3004	3050	3097	3143	3190	3236	3283	3329	3376	3422	7 32.2
9340	970 3469	3515	3562	3608	3655	3701	3748	3794	3841	3887	8 36.8
41	3934	3980	4027	4073	4120	4166	4213	4259	4306	4352	9 41.4
42	4399	4445	4492	4538	4585	4631	4678	4724	4771	4817	
43	4863	4910	4956	5003	5049	5096	5142	5189	5235	5282	
44	5328	5375	5421	5468	5514	5561	5607	5654	5700	5747	
45	5793	5840	5886	5932	5979	6025	6072	6118	6165	6211	
46	6258	6304	6351	6397	6444	6490	6537	6583	6629	6676	
47	6722	6769	6815	6862	6908	6955	7001	7048	7094	7141	
48	7187	7233	7280	7326	7373	7419	7466	7512	7559	7605	
49	7652	7698	7745	7791	7837	7884	7930	7977	8023	8070	
9350	970 8116	8163	8209	8255	8302	8348	8395	8441	8488	8534	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

93000″ = 25° 50′ 0″ 9300″ = 2° 35′ 0″ S. 4.685 4277 T. 8693
93100 = 25 51 40 9310 = 2 35 10 4274 8699
93200 = 25 53 20 9320 = 2 35 20 4271 8706
93300 = 25 55 0 9330 = 2 35 30 4268 8712
93400 = 25 56 40 9340 = 2 35 40 4264 8718

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9350	970 8116	8163	8209	8255	8302	8348	8395	8441	8488	8534	
51	8581	8627	8673	8720	8766	8813	8859	8906	8952	8999	
52	9045	9091	9138	9184	9231	9277	9324	9370	9416	9463	
53	9509	9556	9602	9649	9695	9742	9788	9834	9881	9927	
54	9974	0̄020	0̄067	0̄113	0̄159	0̄206	0̄252	0̄299	0̄345	0̄391	
55	971 0438	0484	0531	0577	0624	0670	0716	0763	0809	0856	
56	0902	0949	0995	1041	1088	1134	1181	1227	1273	1320	
57	1366	1413	1459	1506	1552	1598	1645	1691	1738	1784	
58	1830	1877	1923	1970	2016	2062	2109	2155	2202	2248	
59	2294	2341	2387	2434	2480	2526	2573	2619	2666	2712	
9360	971 2758	2805	2851	2898	2944	2990	3037	3083	3130	3176	
61	3222	3269	3315	3362	3408	3454	3501	3547	3594	3640	47 1 4.7 2 9.4 3 14.1 4 18.8 5 23.5 6 28.2 7 32.9 8 37.6 9 42.3
62	3686	3733	3779	3826	3872	3918	3965	4011	4057	4104	
63	4150	4197	4243	4289	4336	4382	4429	4475	4521	4568	
64	4614	4660	4707	4753	4800	4846	4892	4939	4985	5031	
65	5078	5124	5171	5217	5263	5310	5356	5402	5449	5495	
66	5542	5588	5634	5681	5727	5773	5820	5866	5912	5959	
67	6005	6052	6098	6144	6191	6237	6283	6330	6376	6422	
68	6469	6515	6562	6608	6654	6701	6747	6793	6840	6886	
69	6932	6979	7025	7071	7118	7164	7211	7257	7303	7350	
9370	971 7396	7442	7489	7535	7581	7628	7674	7720	7767	7813	
71	7859	7906	7952	7998	8045	8091	8137	8184	8230	8276	
72	8323	8369	8415	8462	8508	8554	8601	8647	8694	8740	
73	8786	8833	8879	8925	8972	9018	9064	9111	9157	9203	
74	9249	9296	9342	9388	9435	9481	9527	9574	9620	9666	
75	9713	9759	9805	9852	9898	9944	9991	0̄037	0̄083	0̄130	
76	972 0176	0222	0269	0315	0361	0408	0454	0500	0547	0593	
77	0639	0685	0732	0778	0824	0871	0917	0963	1010	1056	
78	1102	1149	1195	1241	1288	1334	1380	1426	1473	1519	
79	1565	1612	1658	1704	1751	1797	1843	1889	1936	1982	
9380	972 2028	2075	2121	2167	2214	2260	2306	2352	2399	2445	
81	2491	2538	2584	2630	2677	2723	2769	2815	2862	2908	46 1 4.6 2 9.2 3 13.8 4 18.4 5 23.0 6 27.6 7 32.2 8 36.8 9 41.4
82	2954	3001	3047	3093	3139	3186	3232	3278	3325	3371	
83	3417	3463	3510	3556	3602	3649	3695	3741	3787	3834	
84	3880	3926	3973	4019	4065	4111	4158	4204	4250	4296	
85	4343	4389	4435	4482	4528	4574	4620	4667	4713	4759	
86	4805	4852	4898	4944	4991	5037	5083	5129	5176	5222	
87	5268	5314	5361	5407	5453	5500	5546	5592	5638	5685	
88	5731	5777	5823	5870	5916	5962	6008	6055	6101	6147	
89	6193	6240	6286	6332	6378	6425	6471	6517	6563	6610	
9390	972 6656	6702	6748	6795	6841	6887	6933	6980	7026	7072	
91	7118	7165	7211	7257	7303	7350	7396	7442	7488	7535	
92	7581	7627	7673	7720	7766	7812	7858	7905	7951	7997	
93	8043	8089	8136	8182	8228	8274	8321	8367	8413	8459	
94	8506	8552	8598	8644	8690	8737	8783	8829	8875	8922	
95	8968	9014	9060	9107	9153	9199	9245	9291	9338	9384	
96	9430	9476	9523	9569	9615	9661	9707	9754	9800	9846	
97	9892	9938	9985	0̄031	0̄077	0̄123	0̄170	0̄216	0̄262	0̄308	
98	973 0354	0401	0447	0493	0539	0585	0632	0678	0724	0770	
99	0816	0863	0909	0955	1001	1048	1094	1140	1186	1232	
9400	973 1279	1325	1371	1417	1463	1510	1556	1602	1648	1694	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

93500″ = 25° 58′ 20″ 9350″ = 2° 35′ 50″ S. 4.685 4261 T. 8725
93600 = 26 0 0 9360 = 2 36 0 4258 8731
93700 = 26 1 40 9370 = 2 36 10 4255 8737
93800 = 26 3 20 9380 = 2 36 20 4252 8744
93900 = 26 5 0 9390 = 2 36 30 4248 8750

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9400	973 1279	1325	1371	1417	1463	1510	1556	1602	1648	1694	
01	1741	1787	1833	1879	1925	1972	2018	2064	2110	2156	
02	2202	2249	2295	2341	2387	2433	2480	2526	2572	2618	
03	2664	2711	2757	2803	2849	2895	2941	2988	3034	3080	
04	3126	3172	3219	3265	3311	3357	3403	3449	3496	3542	
05	3588	3634	3680	3727	3773	3819	3865	3911	3957	4004	
06	4050	4096	4142	4188	4234	4281	4327	4373	4419	4465	
07	4511	4558	4604	4650	4696	4742	4788	4835	4881	4927	
08	4973	5019	5065	5112	5158	5204	5250	5296	5342	5389	
09	5435	5481	5527	5573	5619	5665	5712	5758	5804	5850	
9410	973 5896	5942	5989	6035	6081	6127	6173	6219	6265	6312	
11	6358	6404	6450	6496	6542	6588	6635	6681	6727	6773	47
12	6819	6865	6911	6958	7004	7050	7096	7142	7188	7234	1 4.7
13	7281	7327	7373	7419	7465	7511	7557	7604	7650	7696	2 9.4
14	7742	7788	7834	7880	7926	7973	8019	8065	8111	8157	3 14.1
15	8203	8249	8295	8342	8388	8434	8480	8526	8572	8618	4 18.8
16	8664	8711	8757	8803	8849	8895	8941	8987	9033	9080	5 23.5 6 28.2
17	9126	9172	9218	9264	9310	9356	9402	9449	9495	9541	7 32.9
18	9587	9633	9679	9725	9771	9817	9864	9910	9956	0̄002	8 37.6
19	974 0048	0094	0140	0186	0232	0279	0325	0371	0417	0463	9 42.3
9420	974 0509	0555	0601	0647	0693	0740	0786	0832	0878	0924	
21	0970	1016	1062	1108	1154	1201	1247	1293	1339	1385	
22	1431	1477	1523	1569	1615	1661	1708	1754	1800	1846	
23	1892	1938	1984	2030	2076	2122	2168	2215	2261	2307	
24	2353	2399	2445	2491	2537	2583	2629	2675	2721	2768	
25	2814	2860	2906	2952	2998	3044	3090	3136	3182	3228	
26	3274	3320	3367	3413	3459	3505	3551	3597	3643	3689	
27	3735	3781	3827	3873	3919	3965	4011	4058	4104	4150	
28	4196	4242	4288	4334	4380	4426	4472	4518	4564	4610	
29	4656	4702	4748	4795	4841	4887	4933	4979	5025	5071	
9430	974 5117	5163	5209	5255	5301	5347	5393	5439	5485	5531	
31	5577	5623	5670	5716	5762	5808	5854	5900	5946	5992	46
32	6038	6084	6130	6176	6222	6268	6314	6360	6406	6452	1 4.6
33	6498	6544	6590	6636	6683	6729	6775	6821	6867	6913	2 9.2
34	6959	7005	7051	7097	7143	7189	7235	7281	7327	7373	3 13.8
35	7419	7465	7511	7557	7603	7649	7695	7741	7787	7833	4 18.4
36	7879	7925	7971	8017	8063	8109	8155	8201	8248	8294	5 23.0 6 27.6
37	8340	8386	8432	8478	8524	8570	8616	8662	8708	8754	7 32.2
38	8800	8846	8892	8938	8984	9030	9076	9122	9168	9214	8 36.8
39	9260	9306	9352	9398	9444	9490	9536	9582	9628	9674	9 41.4
9440	974 9720	9766	9812	9858	9904	9950	9996	0̄042	0̄088	0̄134	
41	975 0180	0226	0272	0318	0364	0410	0456	0502	0548	0594	
42	0640	0686	0732	0778	0824	0870	0916	0962	1008	1054	
43	1100	1146	1192	1238	1284	1330	1376	1422	1468	1514	
44	1560	1606	1652	1698	1744	1790	1836	1882	1928	1974	
45	2020	2066	2112	2158	2204	2250	2296	2341	2387	2433	
46	2479	2525	2571	2617	2663	2709	2755	2801	2847	2893	
47	2939	2985	3031	3077	3123	3169	3215	3261	3307	3353	
48	3399	3445	3491	3537	3583	3629	3675	3721	3767	3813	
49	3858	3904	3950	3996	4042	4088	4134	4180	4226	4272	
9450	975 4318	4364	4410	4456	4502	4548	4594	4640	4686	4732	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

94000″ = 26° 6′ 40″ 9400″ = 2° 36′ 40″ S. 4.685 4245 T. 8757
94100 = 26 8 20 9410 = 2 36 50 4242 8763
94200 = 26 10 0 9420 = 2 37 0 4239 8769
94300 = 26 11 40 9430 = 2 37 10 4236 8776
94400 = 26 13 20 9440 = 2 37 20 4232 8782

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9450	975 4318	4364	4410	4456	4502	4548	4594	4640	4686	4732	
51	4778	4824	4870	4915	4961	5007	5053	5099	5145	5191	
52	5237	5283	5329	5375	5421	5467	5513	5559	5605	5651	
53	5697	5743	5788	5834	5880	5926	5972	6018	6064	6110	
54	6156	6202	6248	6294	6340	6386	6432	6478	6523	6569	
55	6615	6661	6707	6753	6799	6845	6891	6937	6983	7029	
56	7075	7121	7166	7212	7258	7304	7350	7396	7442	7488	
57	7534	7580	7626	7672	7718	7763	7809	7855	7901	7947	
58	7993	8039	8085	8131	8177	8223	8269	8315	8360	8406	
59	8452	8498	8544	8590	8636	8682	8728	8774	8820	8865	
9460	975 8911	8957	9003	9049	9095	9141	9187	9233	9279	9325	
61	9370	9416	9462	9508	9554	9600	9646	9692	9738	9784	46
62	9829	9875	9921	9967	0̄013	0̄059	0̄105	0̄151	0̄197	0̄243	1 4.6
63	976 0288	0334	0380	0426	0472	0518	0564	0610	0656	0701	2 9.2
64	0747	0793	0839	0885	0931	0977	1023	1069	1114	1160	3 13.8
65	1206	1252	1298	1344	1390	1436	1481	1527	1573	1619	4 18.4
66	1665	1711	1757	1803	1849	1894	1940	1986	2032	2078	5 23.0 6 27.6
67	2124	2170	2216	2261	2307	2353	2399	2445	2491	2537	7 32.2
68	2582	2628	2674	2720	2766	2812	2858	2904	2949	2995	8 36.8
69	3041	3087	3133	3179	3225	3270	3316	3362	3408	3454	9 41.4
9470	976 3500	3546	3592	3637	3683	3729	3775	3821	3867	3913	
71	3958	4004	4050	4096	4142	4188	4233	4279	4325	4371	
72	4417	4463	4509	4554	4600	4646	4692	4738	4784	4830	
73	4875	4921	4967	5013	5059	5105	5150	5196	5242	5288	
74	5334	5380	5425	5471	5517	5563	5609	5655	5701	5746	
75	5792	5838	5884	5930	5976	6021	6067	6113	6159	6205	
76	6251	6296	6342	6388	6434	6480	6525	6571	6617	6663	
77	6709	6755	6800	6846	6892	6938	6984	7030	7075	7121	
78	7167	7213	7259	7305	7350	7396	7442	7488	7534	7579	
79	7625	7671	7717	7763	7808	7854	7900	7946	7992	8038	
9480	976 8083	8129	8175	8221	8267	8312	8358	8404	8450	8496	
81	8541	8587	8633	8679	8725	8770	8816	8862	8908	8954	45
82	9000	9045	9091	9137	9183	9229	9274	9320	9366	9412	1 4.5
83	9458	9503	9549	9595	9641	9686	9732	9778	9824	9870	2 9.0
84	9915	9961	0̄007	0̄053	0̄099	0̄144	0̄190	0̄236	0̄282	0̄328	3 13.5
85	977 0373	0419	0465	0511	0556	0602	0648	0694	0740	0785	4 18.0
86	0831	0877	0923	0969	1014	1060	1106	1152	1197	1243	5 22.5 6 27.0
87	1289	1335	1381	1426	1472	1518	1564	1609	1655	1701	7 31.5
88	1747	1793	1838	1884	1930	1976	2021	2067	2113	2159	8 36.0
89	2204	2250	2296	2342	2388	2433	2479	2525	2571	2616	9 40.5
9490	977 2662	2708	2754	2799	2845	2891	2937	2982	3028	3074	
91	3120	3165	3211	3257	3303	3349	3394	3440	3486	3532	
92	3577	3623	3669	3715	3760	3806	3852	3898	3943	3989	
93	4035	4081	4126	4172	4218	4264	4309	4355	4401	4447	
94	4492	4538	4584	4630	4675	4721	4767	4812	4858	4904	
95	4950	4995	5041	5087	5133	5178	5224	5270	5316	5361	
96	5407	5453	5499	5544	5590	5636	5681	5727	5773	5819	
97	5864	5910	5956	6002	6047	6093	6139	6184	6230	6276	
98	6322	6367	6413	6459	6505	6550	6596	6642	6687	6733	
99	6779	6825	6870	6916	6962	7007	7053	7099	7145	7190	
9500	977 7236	7282	7327	7373	7419	7465	7510	7556	7602	7647	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

94500″ = 26° 15′ 0″	9450″ = 2° 37′ 30″	S. 4.685 4229	T. 8789
94600 = 26 16 40	9460 = 2 37 40	4226	8795
94700 = 26 18 20	9470 = 2 37 50	4223	8802
94800 = 26 20 0	9480 = 2 38 0	4220	8808
94900 = 26 21 40	9490 = 2 38 10	4216	8815

N.	0	1	2	3	4	5	6	7	8	9
9500	977 7236	7282	7327	7373	7419	7465	7510	7556	7602	7647
01	7693	7739	7785	7830	7876	7922	7967	8013	8059	8105
02	8150	8196	8242	8287	8333	8379	8424	8470	8516	8562
03	8607	8653	8699	8744	8790	8836	8881	8927	8973	9019
04	9064	9110	9156	9201	9247	9293	9338	9384	9430	9476
05	9521	9567	9613	9658	9704	9750	9795	9841	9887	9932
06	9978	$\bar{0}024$	$\bar{0}069$	$\bar{0}115$	$\bar{0}161$	$\bar{0}207$	$\bar{0}252$	$\bar{0}298$	$\bar{0}344$	$\bar{0}389$
07	978 0435	0481	0526	0572	0618	0663	0709	0755	0800	0846
08	0892	0937	0983	1029	1074	1120	1166	1211	1257	1303
09	1348	1394	1440	1485	1531	1577	1622	1668	1714	1760
9510	978 1805	1851	1897	1942	1988	2033	2079	2125	2170	2216
11	2262	2307	2353	2399	2444	2490	2536	2581	2627	2673
12	2718	2764	2810	2855	2901	2947	2992	3038	3084	3129
13	3175	3221	3266	3312	3358	3403	3449	3495	3540	3586
14	3631	3677	3723	3768	3814	3860	3905	3951	3997	4042
15	4088	4134	4179	4225	4270	4316	4362	4407	4453	4499
16	4544	4590	4636	4681	4727	4773	4818	4864	4909	4955
17	5001	5046	5092	5138	5183	5229	5274	5320	5366	5411
18	5457	5503	5548	5594	5640	5685	5731	5776	5822	5868
19	5913	5959	6005	6050	6096	6141	6187	6233	6278	6324
9520	978 6369	6415	6461	6506	6552	6598	6643	6689	6734	6780
21	6826	6871	6917	6962	7008	7054	7099	7145	7191	7236
22	7282	7327	7373	7419	7464	7510	7555	7601	7647	7692
23	7738	7783	7829	7875	7920	7966	8011	8057	8103	8148
24	8194	8239	8285	8331	8376	8422	8467	8513	8559	8604
25	8650	8695	8741	8787	8832	8878	8923	8969	9015	9060
26	9106	9151	9197	9243	9288	9334	9379	9425	9470	9516
27	9562	9607	9653	9698	9744	9790	9835	9881	9926	9972
28	979 0017	0063	0109	0154	0200	0245	0291	0337	0382	0428
29	0473	0519	0564	0610	0656	0701	0747	0792	0838	0883
9530	979 0929	0975	1020	1066	1111	1157	1202	1248	1294	1339
31	1385	1430	1476	1521	1567	1613	1658	1704	1749	1795
32	1840	1886	1931	1977	2023	2068	2114	2159	2205	2250
33	2296	2341	2387	2433	2478	2524	2569	2615	2660	2706
34	2751	2797	2843	2888	2934	2979	3025	3070	3116	3161
35	3207	3253	3298	3344	3389	3435	3480	3526	3571	3617
36	3662	3708	3754	3799	3845	3890	3936	3981	4027	4072
37	4118	4163	4209	4254	4300	4346	4391	4437	4482	4528
38	4573	4619	4664	4710	4755	4801	4846	4892	4937	4983
39	5028	5074	5120	5165	5211	5256	5302	5347	5393	5438
9540	979 5484	5529	5575	5620	5666	5711	5757	5802	5848	5893
41	5939	5984	6030	6076	6121	6167	6212	6258	6303	6349
42	6394	6440	6485	6531	6576	6622	6667	6713	6758	6804
43	6849	6895	6940	6986	7031	7077	7122	7168	7213	7259
44	7304	7350	7395	7441	7486	7532	7577	7623	7668	7714
45	7759	7805	7850	7896	7941	7987	8032	8078	8123	8169
46	8214	8260	8305	8351	8396	8442	8487	8533	8578	8624
47	8669	8715	8760	8806	8851	8897	8942	8988	9033	9079
48	9124	9170	9215	9261	9306	9352	9397	9442	9488	9533
49	9579	9624	9670	9715	9761	9806	9852	9897	9943	9988
9550	980 0034	0079	0125	0170	0216	0261	0307	0352	0398	0443
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	46
1	4.6
2	9.2
3	13.8
4	18.4
5	23.0
6	27.6
7	32.2
8	36.8
9	41.4

	45
1	4.5
2	9.0
3	13.5
4	18.0
5	22.5
6	27.0
7	31.5
8	36.0
9	40.5

95000″ = 26° 23′ 20″	9500″ = 2° 38′ 20″	S. 4.685 4213	T. 8821
95100 = 26 25 0	9510 = 2 38 30	4210	8828
95200 = 26 26 40	9520 = 2 38 40	4207	8834
95300 = 26 28 20	9530 = 2 38 50	4203	8840
95400 = 26 30 0	9540 = 2 39 0	4200	8847

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9550	980 0034	0079	0125	0170	0216	0261	0307	0352	0398	0443	
51	0488	0534	0579	0625	0670	0716	0761	0807	0852	0898	
52	0943	0989	1034	1080	1125	1170	1216	1261	1307	1352	
53	1398	1443	1489	1534	1580	1625	1671	1716	1761	1807	
54	1852	1898	1943	1989	2034	2080	2125	2171	2216	2261	
55	2307	2352	2398	2443	2489	2534	2580	2625	2671	2716	
56	2761	2807	2852	2898	2943	2989	3034	3080	3125	3170	
57	3216	3261	3307	3352	3398	3443	3489	3534	3579	3625	
58	3670	3716	3761	3807	3852	3897	3943	3988	4034	4079	
59	4125	4170	4215	4261	4306	4352	4397	4443	4488	4533	
9560	980 4579	4624	4670	4715	4761	4806	4851	4897	4942	4988	
61	5033	5079	5124	5169	5215	5260	5306	5351	5397	5442	46 1 4.6 2 9.2 3 13.8 4 18.4 5 23.0 6 27.6 7 32.2 8 36.8 9 41.4
62	5487	5533	5578	5624	5669	5714	5760	5805	5851	5896	
63	5942	5987	6032	6078	6123	6169	6214	6259	6305	6350	
64	6396	6441	6486	6532	6577	6623	6668	6714	6759	6804	
65	6850	6895	6941	6986	7031	7077	7122	7168	7213	7258	
66	7304	7349	7395	7440	7485	7531	7576	7622	7667	7712	
67	7758	7803	7849	7894	7939	7985	8030	8075	8121	8166	
68	8212	8257	8302	8348	8393	8439	8484	8529	8575	8620	
69	8666	8711	8756	8802	8847	8892	8938	8983	9029	9074	
9570	980 9119	9165	9210	9256	9301	9346	9392	9437	9482	9528	
71	9573	9619	9664	9709	9755	9800	9845	9891	9936	9982	
72	981 0027	0072	0118	0163	0208	0254	0299	0344	0390	0435	
73	0481	0526	0571	0617	0662	0707	0753	0798	0844	0889	
74	0934	0980	1025	1070	1116	1161	1206	1252	1297	1342	
75	1388	1433	1479	1524	1569	1615	1660	1705	1751	1796	
76	1841	1887	1932	1977	2023	2068	2113	2159	2204	2250	
77	2295	2340	2386	2431	2476	2522	2567	2612	2658	2703	
78	2748	2794	2839	2884	2930	2975	3020	3066	3111	3156	
79	3202	3247	3292	3338	3383	3428	3474	3519	3564	3610	
9580	981 3655	3700	3746	3791	3836	3882	3927	3972	4018	4063	
81	4108	4154	4199	4244	4290	4335	4380	4426	4471	4516	45 1 4.5 2 9.0 3 13.5 4 18.0 5 22.5 6 27.0 7 31.5 8 36.0 9 40.5
82	4562	4607	4652	4698	4743	4788	4834	4879	4924	4970	
83	5015	5060	5106	5151	5196	5241	5287	5332	5377	5423	
84	5468	5513	5559	5604	5649	5695	5740	5785	5831	5876	
85	5921	5966	6012	6057	6102	6148	6193	6238	6284	6329	
86	6374	6420	6465	6510	6555	6601	6646	6691	6737	6782	
87	6827	6873	6918	6963	7008	7054	7099	7144	7190	7235	
88	7280	7326	7371	7416	7461	7507	7552	7597	7643	7688	
89	7733	7778	7824	7869	7914	7960	8005	8050	8095	8141	
9590	981 8186	8231	8277	8322	8367	8412	8458	8503	8548	8594	
91	8639	8684	8729	8775	8820	8865	8911	8956	9001	9046	
92	9092	9137	9182	9228	9273	9318	9363	9409	9454	9499	
93	9544	9590	9635	9680	9726	9771	9816	9861	9907	9952	
94	9997	0̄042	0̄088	0̄133	0̄178	0̄223	0̄269	0̄314	0̄359	0̄405	
95	982 0450	0495	0540	0586	0631	0676	0721	0767	0812	0857	
96	0902	0948	0993	1038	1083	1129	1174	1219	1264	1310	
97	1355	1400	1445	1491	1536	1581	1626	1672	1717	1762	
98	1807	1853	1898	1943	1988	2034	2079	2124	2169	2215	
99	2260	2305	2350	2396	2441	2486	2531	2577	2622	2667	
9600	982 2712	2758	2803	2848	2893	2939	2984	3029	3074	3119	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

95500″ = 26° 31′ 40″ 9550″ = 2° 39′ 10″ S. 4.685 4197 T. 8853
95600 = 26 33 20 9560 = 2 39 20 4194 8860
95700 = 26 35 0 9570 = 2 39 30 4190 8867
95800 = 26 36 40 9580 = 2 39 40 4187 8873
95900 = 26 38 20 9590 = 2 39 50 4184 8880

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9600	982 2712	2758	2803	2848	2893	2939	2984	3029	3074	3119	
01	3165	3210	3255	3300	3346	3391	3436	3481	3527	3572	
02	3617	3662	3707	3753	3798	3843	3888	3934	3979	4024	
03	4069	4115	4160	4205	4250	4295	4341	4386	4431	4476	
04	4522	4567	4612	4657	4702	4748	4793	4838	4883	4928	
05	4974	5019	5064	5109	5155	5200	5245	5290	5335	5381	
06	5426	5471	5516	5561	5607	5652	5697	5742	5787	5833	
07	5878	5923	5968	6014	6059	6104	6149	6194	6240	6285	
08	6330	6375	6420	6466	6511	6556	6601	6646	6692	6737	
09	6782	6827	6872	6918	6963	7008	7053	7098	7143	7189	
9610	982 7234	7279	7324	7369	7415	7460	7505	7550	7595	7641	
11	7686	7731	7776	7821	7867	7912	7957	8002	8047	8092	46
12	8138	8183	8228	8273	8318	8364	8409	8454	8499	8544	1 4.6
13	8589	8635	8680	8725	8770	8815	8860	8906	8951	8996	2 9.2
14	9041	9086	9132	9177	9222	9267	9312	9357	9403	9448	3 13.8 4 18.4
15	9493	9538	9583	9628	9674	9719	9764	9809	9854	9899	5 23.0
16	9945	9990	0̄035	0̄080	0̄125	0̄170	0̄216	0̄261	0̄306	0̄351	6 27.6
17	983 0396	0441	0486	0532	0577	0622	0667	0712	0757	0803	7 32.2
18	0848	0893	0938	0983	1028	1073	1119	1164	1209	1254	8 36.8
19	1299	1344	1390	1435	1480	1525	1570	1615	1660	1706	9 41.4
9620	983 1751	1796	1841	1886	1931	1976	2022	2067	2112	2157	
21	2202	2247	2292	2338	2383	2428	2473	2518	2563	2608	
22	2654	2699	2744	2789	2834	2879	2924	2969	3015	3060	
23	3105	3150	3195	3240	3285	3331	3376	3421	3466	3511	
24	3556	3601	3646	3692	3737	3782	3827	3872	3917	3962	
25	4007	4053	4098	4143	4188	4233	4278	4323	4368	4413	
26	4459	4504	4549	4594	4639	4684	4729	4774	4819	4865	
27	4910	4955	5000	5045	5090	5135	5180	5225	5271	5316	
28	5361	5406	5451	5496	5541	5586	5631	5677	5722	5767	
29	5812	5857	5902	5947	5992	6037	6082	6128	6173	6218	
9630	983 6263	6308	6353	6398	6443	6488	6533	6579	6624	6669	
31	6714	6759	6804	6849	6894	6939	6984	7029	7075	7120	45
32	7165	7210	7255	7300	7345	7390	7435	7480	7525	7571	1 4.5
33	7616	7661	7706	7751	7796	7841	7886	7931	7976	8021	2 9.0
34	8066	8111	8157	8202	8247	8292	8337	8382	8427	8472	3 13.5 4 18.0
35	8517	8562	8607	8652	8697	8743	8788	8833	8878	8923	5 22.5
36	8968	9013	9058	9103	9148	9193	9238	9283	9328	9374	6 27.0
37	9419	9464	9509	9554	9599	9644	9689	9734	9779	9824	7 31.5
38	9869	9914	9959	0̄004	0̄049	0̄095	0̄140	0̄185	0̄230	0̄275	8 36.0
39	984 0320	0365	0410	0455	0500	0545	0590	0635	0680	0725	9 40.5
9640	984 0770	0815	0860	0905	0951	0996	1041	1086	1131	1176	
41	1221	1266	1311	1356	1401	1446	1491	1536	1581	1626	
42	1671	1716	1761	1806	1851	1896	1942	1987	2032	2077	
43	2122	2167	2212	2257	2302	2347	2392	2437	2482	2527	
44	2572	2617	2662	2707	2752	2797	2842	2887	2932	2977	
45	3022	3067	3112	3157	3202	3247	3292	3338	3383	3428	
46	3473	3518	3563	3608	3653	3698	3743	3788	3833	3878	
47	3923	3968	4013	4058	4103	4148	4193	4238	4283	4328	
48	4373	4418	4463	4508	4553	4598	4643	4688	4733	4778	
49	4823	4868	4913	4958	5003	5048	5093	5138	5183	5228	
9650	984 5273	5318	5363	5408	5453	5498	5543	5588	5633	5678	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

96000″ = 26°40′ 0″ 9600″ = 2°40′ 0″ S. 4.685 4181 T. 8886
96100 = 26 41 40 9610 = 2 40 10 4177 8893
96200 = 26 43 20 9620 = 2 40 20 4174 8899
96300 = 26 45 0 9630 = 2 40 30 4171 8906
96400 = 26 46 40 9640 = 2 40 40 4168 8912

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9650	984 5273	5318	5363	5408	5453	5498	5543	5588	5633	5678	
51	5723	5768	5813	5858	5903	5948	5993	6038	6083	6128	
52	6173	6218	6263	6308	6353	6398	6443	6488	6533	6578	
53	6623	6668	6713	6758	6803	6848	6893	6938	6983	7028	
54	7073	7118	7163	7208	7253	7298	7343	7388	7433	7478	
55	7523	7568	7613	7658	7703	7748	7793	7838	7883	7928	
56	7973	8018	8063	8107	8152	8197	8242	8287	8332	8377	
57	8422	8467	8512	8557	8602	8647	8692	8737	8782	8827	
58	8872	8917	8962	9007	9052	9097	9142	9187	9232	9277	
59	9322	9367	9412	9457	9502	9546	9591	9636	9681	9726	
9660	984 9771	9816	9861	9906	9951	9996	0̄041	0̄086	0̄131	0̄176	
61	985 0221	0266	0311	0356	0401	0446	0491	0535	0580	0625	45
62	0670	0715	0760	0805	0850	0895	0940	0985	1030	1075	1 4.5
63	1120	1165	1210	1255	1300	1345	1389	1434	1479	1524	2 9.0
64	1569	1614	1659	1704	1749	1794	1839	1884	1929	1974	3 13.5
65	2019	2064	2108	2153	2198	2243	2288	2333	2378	2423	4 18.0
66	2468	2513	2558	2603	2648	2693	2737	2782	2827	2872	5 22.5 6 27.0
67	2917	2962	3007	3052	3097	3142	3187	3232	3277	3321	7 31.5
68	3366	3411	3456	3501	3546	3591	3636	3681	3726	3771	8 36.0
69	3816	3861	3905	3950	3995	4040	4085	4130	4175	4220	9 40.5
9670	985 4265	4310	4355	4399	4444	4489	4534	4579	4624	4669	
71	4714	4759	4804	4849	4893	4938	4983	5028	5073	5118	
72	5163	5208	5253	5298	5342	5387	5432	5477	5522	5567	
73	5612	5657	5702	5747	5791	5836	5881	5926	5971	6016	
74	6061	6106	6151	6196	6240	6285	6330	6375	6420	6465	
75	6510	6555	6600	6644	6689	6734	6779	6824	6869	6914	
76	6959	7003	7048	7093	7138	7183	7228	7273	7318	7363	
77	7407	7452	7497	7542	7587	7632	7677	7722	7766	7811	
78	7856	7901	7946	7991	8036	8081	8125	8170	8215	8260	
79	8305	8350	8395	8440	8484	8529	8574	8619	8664	8709	
9680	985 8754	8798	8843	8888	8933	8978	9023	9068	9112	9157	
81	9202	9247	9292	9337	9382	9426	9471	9516	9561	9606	44
82	9651	9696	9740	9785	9830	9875	9920	9965	0̄010	0̄054	1 4.4
83	986 0099	0144	0189	0234	0279	0324	0368	0413	0458	0503	2 8.8
84	0548	0593	0637	0682	0727	0772	0817	0862	0907	0951	3 13.2
85	0996	1041	1086	1131	1176	1220	1265	1310	1355	1400	4 17.6
86	1445	1489	1534	1579	1624	1669	1714	1758	1803	1848	5 22.0 6 26.4
87	1893	1938	1983	2027	2072	2117	2162	2207	2252	2296	7 30.8
88	2341	2386	2431	2476	2521	2565	2610	2655	2700	2745	8 35.2
89	2790	2834	2879	2924	2969	3014	3058	3103	3148	3193	9 39.6
9690	986 3238	3283	3327	3372	3417	3462	3507	3551	3596	3641	
91	3686	3731	3776	3820	3865	3910	3955	4000	4044	4089	
92	4134	4179	4224	4268	4313	4358	4403	4448	4493	4537	
93	4582	4627	4672	4717	4761	4806	4851	4896	4941	4985	
94	5030	5075	5120	5165	5209	5254	5299	5344	5389	5433	
95	5478	5523	5568	5613	5657	5702	5747	5792	5836	5881	
96	5926	5971	6016	6060	6105	6150	6195	6240	6284	6329	
97	6374	6419	6464	6508	6553	6598	6643	6687	6732	6777	
98	6822	6867	6911	6956	7001	7046	7090	7135	7180	7225	
99	7270	7314	7359	7404	7449	7493	7538	7583	7628	7673	
9700	986 7717	7762	7807	7852	7896	7941	7986	8031	8076	8120	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

96500″ = 26° 48′ 20″	9650″ = 2° 40′ 50″	S. 4.685 4164	T. 8919
96600 = 26 50 0	9660 = 2 41 0	4161	8925
96700 = 26 51 40	9670 = 2 41 10	4158	8932
96800 = 26 53 20	9680 = 2 41 20	4154	8939
96900 = 26 55 0	9690 = 2 41 30	4151	8945

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9700	986 7717	7762	7807	7852	7896	7941	7986	8031	8076	8120	
01	8165	8210	8255	8299	8344	8389	8434	8478	8523	8568	
02	8613	8657	8702	8747	8792	8837	8881	8926	8971	9016	
03	9060	9105	9150	9195	9239	9284	9329	9374	9418	9463	
04	9508	9553	9597	9642	9687	9732	9776	9821	9866	9911	
05	9955	0̄000	0̄045	0̄090	0̄134	0̄179	0̄224	0̄269	0̄313	0̄358	
06	987 0403	0448	0492	0537	0582	0627	0671	0716	0761	0806	
07	0850	0895	0940	0985	1029	1074	1119	1163	1208	1253	
08	1298	1342	1387	1432	1477	1521	1566	1611	1656	1700	
09	1745	1790	1834	1879	1924	1969	2013	2058	2103	2148	
9710	987 2192	2237	2282	2326	2371	2416	2461	2505	2550	2595	
11	2640	2684	2729	2774	2818	2863	2908	2953	2997	3042	45 1 4.5 2 9.0 3 13.5 4 18.0 5 22.5 6 27.0 7 31.5 8 36.0 9 40.5
12	3087	3131	3176	3221	3266	3310	3355	3400	3444	3489	
13	3534	3579	3623	3668	3713	3757	3802	3847	3892	3936	
14	3981	4026	4070	4115	4160	4205	4249	4294	4339	4383	
15	4428	4473	4517	4562	4607	4652	4696	4741	4786	4830	
16	4875	4920	4964	5009	5054	5099	5143	5188	5233	5277	
17	5322	5367	5411	5456	5501	5545	5590	5635	5680	5724	
18	5769	5814	5858	5903	5948	5992	6037	6082	6126	6171	
19	6216	6261	6305	6350	6395	6439	6484	6529	6573	6618	
9720	987 6663	6707	6752	6797	6841	6886	6931	6975	7020	7065	
21	7109	7154	7199	7243	7288	7333	7377	7422	7467	7511	
22	7556	7601	7646	7690	7735	7780	7824	7869	7914	7958	
23	8003	8048	8092	8137	8182	8226	8271	8316	8360	8405	
24	8450	8494	8539	8583	8628	8673	8717	8762	8807	8851	
25	8896	8941	8985	9030	9075	9119	9164	9209	9253	9298	
26	9343	9387	9432	9477	9521	9566	9611	9655	9700	9745	
27	9789	9834	9878	9923	9968	0̄012	0̄057	0̄102	0̄146	0̄191	
28	988 0236	0280	0325	0370	0414	0459	0503	0548	0593	0637	
29	0682	0727	0771	0816	0861	0905	0950	0994	1039	1084	
9730	988 1128	1173	1218	1262	1307	1352	1396	1441	1485	1530	
31	1575	1619	1664	1709	1753	1798	1842	1887	1932	1976	44 1 4.4 2 8.8 3 13.2 4 17.6 5 22.0 6 26.4 7 30.8 8 35.2 9 39.6
32	2021	2066	2110	2155	2200	2244	2289	2333	2378	2423	
33	2467	2512	2556	2601	2646	2690	2735	2780	2824	2869	
34	2913	2958	3003	3047	3092	3136	3181	3226	3270	3315	
35	3360	3404	3449	3493	3538	3583	3627	3672	3716	3761	
36	3806	3850	3895	3939	3984	4029	4073	4118	4162	4207	
37	4252	4296	4341	4386	4430	4475	4519	4564	4609	4653	
38	4698	4742	4787	4831	4876	4921	4965	5010	5054	5099	
39	5144	5188	5233	5277	5322	5367	5411	5456	5500	5545	
9740	988 5590	5634	5679	5723	5768	5813	5857	5902	5946	5991	
41	6035	6080	6125	6169	6214	6258	6303	6348	6392	6437	
42	6481	6526	6570	6615	6660	6704	6749	6793	6838	6882	
43	6927	6972	7016	7061	7105	7150	7194	7239	7284	7328	
44	7373	7417	7462	7506	7551	7596	7640	7685	7729	7774	
45	7818	7863	7908	7952	7997	8041	8086	8130	8175	8220	
46	8264	8309	8353	8398	8442	8487	8531	8576	8621	8665	
47	8710	8754	8799	8843	8888	8932	8977	9022	9066	9111	
48	9155	9200	9244	9289	9333	9378	9423	9467	9512	9556	
49	9601	9645	9690	9734	9779	9823	9868	9913	9957	0̄002	
9750	989 0046	0091	0135	0180	0224	0269	0313	0358	0402	0447	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

97000″ = 26° 56′ 40″ 9700″ = 2° 41′ 40″ S. 4.685 4148 T. 8952
97100 = 26 58 20 9710 = 2 41 50 4144 8958
97200 = 27 0 0 9720 = 2 42 0 4141 8965
97300 = 27 1 40 9730 = 2 42 10 4138 8972
97400 = 27 3 20 9740 = 2 42 20 4135 8978

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9750	989 0046	0091	0135	0180	0224	0269	0313	0358	0402	0447	
51	0492	0536	0581	0625	0670	0714	0759	0803	0848	0892	
52	0937	0981	1026	1071	1115	1160	1204	1249	1293	1338	
53	1382	1427	1471	1516	1560	1605	1649	1694	1738	1783	
54	1828	1872	1917	1961	2006	2050	2095	2139	2184	2228	
55	2273	2317	2362	2406	2451	2495	2540	2584	2629	2673	
56	2718	2762	2807	2851	2896	2940	2985	3030	3074	3119	
57	3163	3208	3252	3297	3341	3386	3430	3475	3519	3564	
58	3608	3653	3697	3742	3786	3831	3875	3920	3964	4009	
59	4053	4098	4142	4187	4231	4276	4320	4365	4409	4454	
9760	989 4498	4543	4587	4632	4676	4721	4765	4810	4854	4899	
61	4943	4988	5032	5077	5121	5166	5210	5255	5299	5344	45 1 4.5 2 9.0 3 13.5 4 18.0 5 22.5 6 27.0 7 31.5 8 36.0 9 40.5
62	5388	5433	5477	5521	5566	5610	5655	5699	5744	5788	
63	5833	5877	5922	5966	6011	6055	6100	6144	6189	6233	
64	6278	6322	6367	6411	6456	6500	6545	6589	6634	6678	
65	6722	6767	6811	6856	6900	6945	6989	7034	7078	7123	
66	7167	7212	7256	7301	7345	7390	7434	7478	7523	7567	
67	7612	7656	7701	7745	7790	7834	7879	7923	7968	8012	
68	8057	8101	8145	8190	8234	8279	8323	8368	8412	8457	
69	8501	8546	8590	8634	8679	8723	8768	8812	8857	8901	
9770	989 8946	8990	9035	9079	9123	9168	9212	9257	9301	9346	
71	9390	9435	9479	9523	9568	9612	9657	9701	9746	9790	
72	9835	9879	9923	9968	0̄012	0̄057	0̄101	0̄146	0̄190	0̄235	
73	990 0279	0323	0368	0412	0457	0501	0546	0590	0634	0679	
74	0723	0768	0812	0857	0901	0946	0990	1034	1079	1123	
75	1168	1212	1257	1301	1345	1390	1434	1479	1523	1568	
76	1612	1656	1701	1745	1790	1834	1878	1923	1967	2012	
77	2056	2101	2145	2189	2234	2278	2323	2367	2411	2456	
78	2500	2545	2589	2634	2678	2722	2767	2811	2856	2900	
79	2944	2989	3033	3078	3122	3167	3211	3255	3300	3344	
9780	990 3389	3433	3477	3522	3566	3611	3655	3699	3744	3788	
81	3833	3877	3921	3966	4010	4055	4099	4143	4188	4232	44 1 4.4 2 8.8 3 13.2 4 17.6 5 22.0 6 26.4 7 30.8 8 35.2 9 39.6
82	4277	4321	4365	4410	4454	4499	4543	4587	4632	4676	
83	4721	4765	4809	4854	4898	4942	4987	5031	5076	5120	
84	5164	5209	5253	5298	5342	5386	5431	5475	5520	5564	
85	5608	5653	5697	5741	5786	5830	5875	5919	5963	6008	
86	6052	6096	6141	6185	6230	6274	6318	6363	6407	6452	
87	6496	6540	6585	6629	6673	6718	6762	6806	6851	6895	
88	6940	6984	7028	7073	7117	7161	7206	7250	7295	7339	
89	7383	7428	7472	7516	7561	7605	7649	7694	7738	7783	
9790	990 7827	7871	7916	7960	8004	8049	8093	8137	8182	8226	
91	8271	8315	8359	8404	8448	8492	8537	8581	8625	8670	
92	8714	8758	8803	8847	8891	8936	8980	9025	9069	9113	
93	9158	9202	9246	9291	9335	9379	9424	9468	9512	9557	
94	9601	9645	9690	9734	9778	9823	9867	9911	9956	0̄000	
95	991 0044	0089	0133	0177	0222	0266	0310	0355	0399	0443	
96	0488	0532	0576	0621	0665	0709	0754	0798	0842	0887	
97	0931	0975	1020	1064	1108	1153	1197	1241	1286	1330	
98	1374	1419	1463	1507	1552	1596	1640	1685	1729	1773	
99	1818	1862	1906	1951	1995	2039	2083	2128	2172	2216	
9800	991 2261	2305	2349	2394	2438	2482	2527	2571	2615	2660	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

97500″ = 27° 5′ 0″ 9750″ = 2° 42′ 30″ S. 4.685 4131 T. 8985
97600 = 27 6 40 9760 = 2 42 40 4128 8992
97700 = 27 8 20 9770 = 2 42 50 4125 8998
97800 = 27 10 0 9780 = 2 43 0 4121 9005
97900 = 27 11 40 9790 = 2 43 10 4118 9012

N.	0	1	2	3	4	5	6	7	8	9
9800	991 2261	2305	2349	2394	2438	2482	2527	2571	2615	2660
01	2704	2748	2793	2837	2881	2925	2970	3014	3058	3103
02	3147	3191	3236	3280	3324	3369	3413	3457	3501	3546
03	3590	3634	3679	3723	3767	3812	3856	3900	3944	3989
04	4033	4077	4122	4166	4210	4255	4299	4343	4387	4432
05	4476	4520	4565	4609	4653	4697	4742	4786	4830	4875
06	4919	4963	5007	5052	5096	5140	5185	5229	5273	5317
07	5362	5406	5450	5495	5539	5583	5627	5672	5716	5760
08	5805	5849	5893	5937	5982	6026	6070	6115	6159	6203
09	6247	6292	6336	6380	6424	6469	6513	6557	6602	6646
9810	991 6690	6734	6779	6823	6867	6911	6956	7000	7044	7088
11	7133	7177	7221	7266	7310	7354	7398	7443	7487	7531
12	7575	7620	7664	7708	7752	7797	7841	7885	7929	7974
13	8018	8062	8107	8151	8195	8239	8284	8328	8372	8416
14	8461	8505	8549	8593	8638	8682	8726	8770	8815	8859
15	8903	8947	8992	9036	9080	9124	9169	9213	9257	9301
16	9345	9390	9434	9478	9522	9567	9611	9655	9699	9744
17	9788	9832	9876	9921	9965	0̄009	0̄053	0̄098	0̄142	0̄186
18	992 0230	0275	0319	0363	0407	0451	0496	0540	0584	0628
19	0673	0717	0761	0805	0850	0894	0938	0982	1026	1071
9820	992 1115	1159	1203	1248	1292	1336	1380	1424	1469	1513
21	1557	1601	1646	1690	1734	1778	1822	1867	1911	1955
22	1999	2044	2088	2132	2176	2220	2265	2309	2353	2397
23	2441	2486	2530	2574	2618	2662	2707	2751	2795	2839
24	2884	2928	2972	3016	3060	3105	3149	3193	3237	3281
25	3326	3370	3414	3458	3502	3547	3591	3635	3679	3723
26	3768	3812	3856	3900	3944	3989	4033	4077	4121	4165
27	4210	4254	4298	4342	4386	4431	4475	4519	4563	4607
28	4651	4696	4740	4784	4828	4872	4917	4961	5005	5049
29	5093	5138	5182	5226	5270	5314	5358	5403	5447	5491
9830	992 5535	5579	5624	5668	5712	5756	5800	5844	5889	5933
31	5977	6021	6065	6109	6154	6198	6242	6286	6330	6375
32	6419	6463	6507	6551	6595	6640	6684	6728	6772	6816
33	6860	6905	6949	6993	7037	7081	7125	7170	7214	7258
34	7302	7346	7390	7435	7479	7523	7567	7611	7655	7699
35	7744	7788	7832	7876	7920	7964	8009	8053	8097	8141
36	8185	8229	8274	8318	8362	8406	8450	8494	8538	8583
37	8627	8671	8715	8759	8803	8847	8892	8936	8980	9024
38	9068	9112	9156	9201	9245	9289	9333	9377	9421	9465
39	9510	9554	9598	9642	9686	9730	9774	9819	9863	9907
9840	992 9951	9995	0̄039	0̄083	0̄128	0̄172	0̄216	0̄260	0̄304	0̄348
41	993 0392	0436	0481	0525	0569	0613	0657	0701	0745	0789
42	0834	0878	0922	0966	1010	1054	1098	1142	1187	1231
43	1275	1319	1363	1407	1451	1495	1540	1584	1628	1672
44	1716	1760	1804	1848	1893	1937	1981	2025	2069	2113
45	2157	2201	2245	2290	2334	2378	2422	2466	2510	2554
46	2598	2642	2687	2731	2775	2819	2863	2907	2951	2995
47	3039	3083	3128	3172	3216	3260	3304	3348	3392	3436
48	3480	3524	3569	3613	3657	3701	3745	3789	3833	3877
49	3921	3965	4010	4054	4098	4142	4186	4230	4274	4318
9850	993 4362	4406	4450	4495	4539	4583	4627	4671	4715	4759
N.	0	1	2	3	4	5	6	7	8	9

P. P.

	45
1	4.5
2	9.0
3	13.5
4	18.0
5	22.5
6	27.0
7	31.5
8	36.0
9	40.5

	44
1	4.4
2	8.8
3	13.2
4	17.6
5	22.0
6	26.4
7	30.8
8	35.2
9	39.6

98000″ = 27° 13′ 20″ 9800″ = 2° 43′ 20″ S. 4.685 4115 T. 9018
98100 = 27 15 0 9810 = 2 43 30 4111 9025
98200 = 27 16 40 9820 = 2 43 40 4108 9032
98300 = 27 18 20 9830 = 2 43 50 4105 9038
98400 = 27 20 0 9840 = 2 44 0 4101 9045

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9850	993 4362	4406	4450	4495	4539	4583	4627	4671	4715	4759	
51	4803	4847	4891	4935	4980	5024	5068	5112	5156	5200	
52	5244	5288	5332	5376	5420	5464	5509	5553	5597	5641	
53	5685	5729	5773	5817	5861	5905	5949	5993	6037	6082	
54	6126	6170	6214	6258	6302	6346	6390	6434	6478	6522	
55	6566	6610	6654	6698	6743	6787	6831	6875	6919	6963	
56	7007	7051	7095	7139	7183	7227	7271	7315	7359	7404	
57	7448	7492	7536	7580	7624	7668	7712	7756	7800	7844	
58	7888	7932	7976	8020	8064	8108	8152	8197	8241	8285	
59	8329	8373	8417	8461	8505	8549	8593	8637	8681	8725	
9860	993 8769	8813	8857	8901	8945	8989	9033	9077	9122	9166	
61	9210	9254	9298	9342	9386	9430	9474	9518	9562	9606	44 1 4.4 2 8.8 3 13.2 4 17.6 5 22.0 6 26.4 7 30.8 8 35.2 9 39.6
62	9650	9694	9738	9782	9826	9870	9914	9958	0̄002	0̄046	
63	994 0090	0134	0178	0222	0266	0310	0355	0399	0443	0487	
64	0531	0575	0619	0663	0707	0751	0795	0839	0883	0927	
65	0971	1015	1059	1103	1147	1191	1235	1279	1323	1367	
66	1411	1455	1499	1543	1587	1631	1675	1719	1763	1807	
67	1851	1895	1939	1983	2027	2071	2115	2159	2203	2247	
68	2291	2335	2379	2423	2467	2511	2555	2599	2643	2687	
69	2731	2775	2820	2864	2908	2952	2996	3040	3084	3128	
9870	994 3172	3216	3260	3304	3348	3392	3436	3480	3524	3568	
71	3612	3656	3700	3744	3788	3831	3875	3919	3963	4007	
72	4051	4095	4139	4183	4227	4271	4315	4359	4403	4447	
73	4491	4535	4579	4623	4667	4711	4755	4799	4843	4887	
74	4931	4975	5019	5063	5107	5151	5195	5239	5283	5327	
75	5371	5415	5459	5503	5547	5591	5635	5679	5723	5767	
76	5811	5855	5899	5943	5987	6031	6075	6119	6163	6207	
77	6251	6295	6338	6382	6426	6470	6514	6558	6602	6646	
78	6690	6734	6778	6822	6866	6910	6954	6998	7042	7086	
79	7130	7174	7218	7262	7306	7350	7394	7438	7482	7525	
9880	994 7569	7613	7657	7701	7745	7789	7833	7877	7921	7965	
81	8009	8053	8097	8141	8185	8229	8273	8317	8361	8405	43 1 4.3 2 8.6 3 12.9 4 17.2 5 21.5 6 25.8 7 30.1 8 34.4 9 38.7
82	8448	8492	8536	8580	8624	8668	8712	8756	8800	8844	
83	8888	8932	8976	9020	9064	9108	9152	9196	9239	9283	
84	9327	9371	9415	9459	9503	9547	9591	9635	9679	9723	
85	9767	9811	9855	9899	9942	9986	0̄030	0̄074	0̄118	0̄162	
86	995 0206	0250	0294	0338	0382	0426	0470	0514	0557	0601	
87	0645	0689	0733	0777	0821	0865	0909	0953	0997	1041	
88	1085	1128	1172	1216	1260	1304	1348	1392	1436	1480	
89	1524	1568	1612	1656	1699	1743	1787	1831	1875	1919	
9890	995 1963	2007	2051	2095	2139	2182	2226	2270	2314	2358	
91	2402	2446	2490	2534	2578	2622	2665	2709	2753	2797	
92	2841	2885	2929	2973	3017	3061	3104	3148	3192	3236	
93	3280	3324	3368	3412	3456	3500	3543	3587	3631	3675	
94	3719	3763	3807	3851	3895	3939	3982	4026	4070	4114	
95	4158	4202	4246	4290	4334	4377	4421	4465	4509	4553	
96	4597	4641	4685	4729	4772	4816	4860	4904	4948	4992	
97	5036	5080	5123	5167	5211	5255	5299	5343	5387	5431	
98	5474	5518	5562	5606	5650	5694	5738	5782	5825	5869	
99	5913	5957	6001	6045	6089	6133	6176	6220	6264	6308	
9900	995 6352	6396	6440	6484	6527	6571	6615	6659	6703	6747	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

98500″ = 27° 21′ 40″	9850″ = 2° 44′ 10″	S. 4.685 4098	T. 9052
98600 = 27 23 20	9860 = 2 44 20	4095	9058
98700 = 27 25 0	9870 = 2 44 30	4091	9065
98800 = 27 26 40	9880 = 2 44 40	4088	9072
98900 = 27 28 20	9890 = 2 44 50	4084	9079

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9900	995 6352	6396	6440	6484	6527	6571	6615	6659	6703	6747	
01	6791	6834	6878	6922	6966	7010	7054	7098	7142	7185	
02	7229	7273	7317	7361	7405	7449	7492	7536	7580	7624	
03	7668	7712	7755	7799	7843	7887	7931	7975	8019	8062	
04	8106	8150	8194	8238	8282	8326	8369	8413	8457	8501	
05	8545	8589	8632	8676	8720	8764	8808	8852	8896	8939	
06	8983	9027	9071	9115	9159	9202	9246	9290	9334	9378	
07	9422	9465	9509	9553	9597	9641	9685	9728	9772	9816	
08	9860	9904	9948	9991	$\bar{0}035$	$\bar{0}079$	$\bar{0}123$	$\bar{0}167$	$\bar{0}211$	$\bar{0}254$	
09	996 0298	0342	0386	0430	0474	0517	0561	0605	0649	0693	
9910	996 0737	0780	0824	0868	0912	0956	0999	1043	1087	1131	
11	1175	1219	1262	1306	1350	1394	1438	1481	1525	1569	44
12	1613	1657	1701	1744	1788	1832	1876	1920	1963	2007	1 4.4
13	2051	2095	2139	2182	2226	2270	2314	2358	2402	2445	2 8.8
14	2489	2533	2577	2621	2664	2708	2752	2796	2840	2883	3 13.2
15	2927	2971	3015	3059	3102	3146	3190	3234	3278	3321	4 17.6
16	3365	3409	3453	3497	3540	3584	3628	3672	3716	3759	5 22.0 6 26.4
17	3803	3847	3891	3935	3978	4022	4066	4110	4153	4197	7 30.8
18	4241	4285	4329	4372	4416	4460	4504	4548	4591	4635	8 35.2
19	4679	4723	4766	4810	4854	4898	4942	4985	5029	5073	9 39.6
9920	996 5117	5161	5204	5248	5292	5336	5379	5423	5467	5511	
21	5554	5598	5642	5686	5730	5773	5817	5861	5905	5948	
22	5992	6036	6080	6124	6167	6211	6255	6299	6342	6386	
23	6430	6474	6517	6561	6605	6649	6693	6736	6780	6824	
24	6868	6911	6955	6999	7043	7086	7130	7174	7218	7261	
25	7305	7349	7393	7436	7480	7524	7568	7611	7655	7699	
26	7743	7786	7830	7874	7918	7961	8005	8049	8093	8136	
27	8180	8224	8268	8311	8355	8399	8443	8486	8530	8574	
28	8618	8661	8705	8749	8793	8836	8880	8924	8968	9011	
29	9055	9099	9143	9186	9230	9274	9318	9361	9405	9449	
9930	996 9492	9536	9580	9624	9667	9711	9755	9799	9842	9886	
31	9930	9974	$\bar{0}017$	$\bar{0}061$	$\bar{0}105$	$\bar{0}148$	$\bar{0}192$	$\bar{0}236$	$\bar{0}280$	$\bar{0}323$	43
32	997 0367	0411	0455	0498	0542	0586	0629	0673	0717	0761	1 4.3
33	0804	0848	0892	0936	0979	1023	1067	1110	1154	1198	2 8.6
34	1242	1285	1329	1373	1416	1460	1504	1548	1591	1635	3 12.9
35	1679	1722	1766	1810	1854	1897	1941	1985	2028	2072	4 17.2
36	2116	2160	2203	2247	2291	2334	2378	2422	2465	2509	5 21.5 6 25.8
37	2553	2597	2640	2684	2728	2771	2815	2859	2903	2946	7 30.1
38	2990	3034	3077	3121	3165	3208	3252	3296	3340	3383	8 34.4
39	3427	3471	3514	3558	3602	3645	3689	3733	3776	3820	9 38.7
9940	997 3864	3908	3951	3995	4039	4082	4126	4170	4213	4257	
41	4301	4344	4388	4432	4475	4519	4563	4607	4650	4694	
42	4738	4781	4825	4869	4912	4956	5000	5043	5087	5131	
43	5174	5218	5262	5305	5349	5393	5436	5480	5524	5567	
44	5611	5655	5699	5742	5786	5830	5873	5917	5961	6004	
45	6048	6092	6135	6179	6223	6266	6310	6354	6397	6441	
46	6485	6528	6572	6616	6659	6703	6747	6790	6834	6878	
47	6921	6965	7009	7052	7096	7139	7183	7227	7270	7314	
48	7358	7401	7445	7489	7532	7576	7620	7663	7707	7751	
49	7794	7838	7882	7925	7969	8013	8056	8100	8144	8187	
9950	997 8231	8274	8318	8362	8405	8449	8493	8536	8580	8624	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

99000″ = 27°30′ 0″ 9900″ = 2°45′ 0″ S. 4.685 4081 T. 9085
99100 = 27 31 40 9910 = 2 45 10 4078 9092
99200 = 27 33 20 9920 = 2 45 20 4074 9099
99300 = 27 35 0 9930 = 2 45 30 4071 9106
99400 = 27 36 40 9940 = 2 45 40 4068 9112

N.	0	1	2	3	4	5	6	7	8	9	P. P.
9950	997 8231	8274	8318	8362	8405	8449	8493	8536	8580	8624	
51	8667	8711	8755	8798	8842	8885	8929	8973	9016	9060	
52	9104	9147	9191	9235	9278	9322	9365	9409	9453	9496	
53	9540	9584	9627	9671	9715	9758	9802	9845	9889	9933	
54	9976	0̄020	0̄064	0̄107	0̄151	0̄195	0̄238	0̄282	0̄325	0̄369	
55	998 0413	0456	0500	0544	0587	0631	0674	0718	0762	0805	
56	0849	0893	0936	0980	1023	1067	1111	1154	1198	1241	
57	1285	1329	1372	1416	1460	1503	1547	1590	1634	1678	
58	1721	1765	1808	1852	1896	1939	1983	2026	2070	2114	
59	2157	2201	2245	2288	2332	2375	2419	2463	2506	2550	
9960	998 2593	2637	2681	2724	2768	2811	2855	2899	2942	2986	
61	3029	3073	3117	3160	3204	3247	3291	3335	3378	3422	44
62	3465	3509	3553	3596	3640	3683	3727	3771	3814	3858	1 4.4
63	3901	3945	3988	4032	4076	4119	4163	4206	4250	4294	2 8.8
64	4337	4381	4424	4468	4512	4555	4599	4642	4686	4729	3 13.2
65	4773	4817	4860	4904	4947	4991	5035	5078	5122	5165	4 17.6
66	5209	5252	5296	5340	5383	5427	5470	5514	5557	5601	5 22.0 6 26.4
67	5645	5688	5732	5775	5819	5862	5906	5950	5993	6037	7 30.8
68	6080	6124	6167	6211	6255	6298	6342	6385	6429	6472	8 35.2
69	6516	6560	6603	6647	6690	6734	6777	6821	6864	6908	9 39.6
9970	998 6952	6995	7039	7082	7126	7169	7213	7256	7300	7344	
71	7387	7431	7474	7518	7561	7605	7648	7692	7736	7779	
72	7823	7866	7910	7953	7997	8040	8084	8128	8171	8215	
73	8258	8302	8345	8389	8432	8476	8519	8563	8607	8650	
74	8694	8737	8781	8824	8868	8911	8955	8998	9042	9086	
75	9129	9173	9216	9260	9303	9347	9390	9434	9477	9521	
76	9564	9608	9651	9695	9739	9782	9826	9869	9913	9956	
77	999 0000	0043	0087	0130	0174	0217	0261	0304	0348	0391	
78	0435	0479	0522	0566	0609	0653	0696	0740	0783	0827	
79	0870	0914	0957	1001	1044	1088	1131	1175	1218	1262	
9980	999 1305	1349	1392	1436	1479	1523	1567	1610	1654	1697	
81	1741	1784	1828	1871	1915	1958	2002	2045	2089	2132	43
82	2176	2219	2263	2306	2350	2393	2437	2480	2524	2567	1 4.3
83	2611	2654	2698	2741	2785	2828	2872	2915	2959	3002	2 8.6
84	3046	3089	3133	3176	3220	3263	3307	3350	3394	3437	3 12.9
85	3481	3524	3568	3611	3655	3698	3742	3785	3829	3872	4 17.2
86	3916	3959	4003	4046	4090	4133	4177	4220	4264	4307	5 21.5 6 25.8
87	4350	4394	4437	4481	4524	4568	4611	4655	4698	4742	7 30.1
88	4785	4829	4872	4916	4959	5003	5046	5090	5133	5177	8 34.4
89	5220	5264	5307	5351	5394	5438	5481	5524	5568	5611	9 38.7
9990	999 5655	5698	5742	5785	5829	5872	5916	5959	6003	6046	
91	6090	6133	6177	6220	6263	6307	6350	6394	6437	6481	
92	6524	6568	6611	6655	6698	6742	6785	6828	6872	6915	
93	6959	7002	7046	7089	7133	7176	7220	7263	7307	7350	
94	7393	7437	7480	7524	7567	7611	7654	7698	7741	7785	
95	7828	7871	7915	7958	8002	8045	8089	8132	8176	8219	
96	8262	8306	8349	8393	8436	8480	8523	8567	8610	8653	
97	8697	8740	8784	8827	8871	8914	8958	9001	9044	9088	
98	9131	9175	9218	9262	9305	9349	9392	9435	9479	9522	
99	9566	9609	9653	9696	9739	9783	9826	9870	9913	9957	
10000	000 0000	0043	0087	0130	0174	0217	0261	0304	0347	0391	
N.	0	1	2	3	4	5	6	7	8	9	P. P.

99500″ = 27° 38′ 20″	9950″ = 2° 45′ 50″	S. 4.685 4064	T. 9119
99600 = 27 40 0	9960 = 2 46 0	4061	9126
99700 = 27 41 40	9970 = 2 46 10	4057	9133
99800 = 27 43 20	9980 = 2 46 20	4054	9140
99900 = 27 45 0	9990 = 2 46 30	4051	9146

Table for converting natural Logarithms into common Log^{s}.				Table for converting common Log^{s}. into natural Log^{s}.			
0	0.000 0000	50	21.714 7241	0	0.000 0000	50	115.129 2546
1	0.434 2945	51	22.149 0186	1	2.302 5851	51	117.431 8397
2	0.868 5890	52	22.583 3131	2	4.605 1702	52	119.734 4248
3	1.302 8834	53	23.017 6075	3	6.907 7553	53	122.037 0099
4	1.737 1779	54	23.451 9020	4	9.210 3404	54	124.339 5950
5	2.171 4724	55	23.886 1965	5	11.512 9255	55	126.642 1801
6	2.605 7669	56	24.320 4910	6	13.815 5106	56	128.944 7652
7	3.040 0614	57	24.754 7855	7	16.118 0957	57	131.247 3503
8	3.474 3559	58	25.189 0800	8	18.420 6807	58	133.549 9354
9	3.908 6503	59	25.623 3744	9	20.723 2658	59	135.852 5205
10	4.342 9448	60	26.057 6689	10	23.025 8509	60	138.155 1056
11	4.777 2393	61	26.491 9634	11	25.328 4360	61	140.457 6907
12	5.211 5338	62	26.926 2579	12	27.631 0211	62	142.760 2758
13	5.645 8283	63	27.360 5524	13	29.933 6062	63	145.062 8609
14	6.080 1227	64	27.794 8468	14	32.236 1913	64	147.365 4460
15	6.514 4172	65	28.229 1413	15	34.538 7764	65	149.668 0310
16	6.948 7117	66	28.663 4358	16	36.841 3615	66	151.970 6161
17	7.383 0062	67	29.097 7303	17	39.143 9466	67	154.273 2012
18	7.817 3007	68	29.532 0248	18	41.446 5317	68	156.575 7863
19	8.251 5952	69	29.966 3193	19	43.749 1168	69	158.878 3714
20	8.685 8896	70	30.400 6137	20	46.051 7019	70	161.180 9565
21	9.120 1841	71	30.834 9082	21	48.354 2870	71	163.483 5416
22	9.554 4786	72	31.269 2027	22	50.656 8720	72	165.786 1267
23	9.988 7731	73	31.703 4972	23	52.959 4571	73	168.088 7118
24	10.423 0676	74	32.137 7917	24	55.262 0422	74	170.391 2969
25	10.857 3620	75	32.572 0861	25	57.564 6273	75	172.693 8820
26	11.291 6565	76	33.006 3806	26	59.867 2124	76	174.996 4671
27	11.725 9510	77	33.440 6751	27	62.169 7975	77	177.299 0522
28	12.160 2455	78	33.874 9696	28	64.472 3826	78	179.601 6373
29	12.594 5400	79	34.309 2641	29	66.774 9677	79	181.904 2223
30	13.028 8345	80	34.743 5586	30	69.077 5528	80	184.206 8074
31	13.463 1289	81	35.177 8530	31	71.380 1379	81	186.509 3925
32	13.897 4234	82	35.612 1475	32	73.682 7230	82	188.811 9776
33	14.331 7179	83	36.046 4420	33	75.985 3081	83	191.114 5627
34	14.766 0124	84	36.480 7365	34	78.287 8932	84	193.417 1478
35	15.200 3069	85	36.915 0310	35	80.590 4783	85	195.719 7329
36	15.634 6013	86	37.349 3254	36	82.893 0633	86	198.022 3180
37	16.068 8958	87	37.783 6199	37	85.195 6484	87	200.324 9031
38	16.503 1903	88	38.217 9144	38	87.498 2335	88	202.627 4882
39	16.937 4848	89	38.652 2089	39	89.800 8186	89	204.930 0733
40	17.371 7793	90	39.086 5034	40	92.103 4037	90	207.232 6584
41	17.806 0738	91	39.520 7979	41	94.405 9888	91	209.535 2435
42	18.240 3682	92	39.955 0923	42	96.708 5739	92	211.837 8286
43	18.674 6627	93	40.389 3868	43	99.011 1590	93	214.140 4136
44	19.108 9572	94	40.823 6813	44	101.313 7441	94	216.442 9987
45	19.543 2517	95	41.257 9758	45	103.616 3292	95	218.745 5838
46	19.977 5462	96	41.692 2703	46	105.918 9143	96	221.048 1689
47	20.411 8406	97	42.126 5647	47	108.221 4994	97	223.350 7540
48	20.846 1351	98	42.560 8592	48	110.524 0845	98	225.653 3391
49	21.280 4296	99	42.995 1537	49	112.826 6696	99	227.955 9242
50	21.714 7241	100	43.429 4482	50	115.129 2546	100	230.258 5093

Base of the common Logarithms = 10.000 0000
Base of the natural Logarithms (ε) = 2.718 2818
Log. nat. 10. . . . . = 2.302 5851
Log. vulg. 2.718 2818 (ε) . . . . = 0.434 2945

II.

LOGARITHMS

OF THE

SINES AND TANGENTS

FROM SECOND TO SECOND.

sin 0°

″	0′	1′	2′	3′	4′	5′	″
0	—	6.463 7261	6.764 7561	6.940 8473	7.065 7860	7.162 6960	60
1	4.685 5749	6.470 9047	6.768 3602	6.943 2534	7.067 5918	7.164 1412	59
2	4.986 6049	6.477 9665	6.771 9347	6.945 6462	7.069 3901	7.165 5817	58
3	5.162 6961	6.484 9154	6.775 4800	6.948 0259	7.071 1810	7.167 0173	57
4	5.287 6349	6.491 7548	6.778 9965	6.950 3926	7.072 9646	7.168 4483	56
5	5.384 5449	6.498 4882	6.782 4849	6.952 7465	7.074 7408	7.169 8745	55
6	5.463 7261	6.505 1188	6.785 9454	6.955 0878	7.076 5099	7.171 2961	54
7	5.530 6729	6.511 6497	6.789 3786	6.957 4164	7.078 2717	7.172 7131	53
8	5.588 6649	6.518 0838	6.792 7848	6.959 7327	7.080 0264	7.174 1254	52
9	5.639 8174	6.524 4239	6.796 1645	6.962 0366	7.081 7741	7.175 5332	51
10	5.685 5749	6.530 6729	6.799 5182	6.964 3284	7.083 5148	7.176 9364	50
11	5.726 9676	6.536 8332	6.802 8461	6.966 6082	7.085 2485	7.178 3351	49
12	5.764 7561	6.542 9074	6.806 1488	6.968 8760	7.086 9753	7.179 7293	48
13	5.799 5182	6.548 8977	6.809 4265	6.971 1321	7.088 6953	7.181 1190	47
14	5.831 7029	6.554 8066	6.812 6796	6.973 3765	7.090 4085	7.182 5043	46
15	5.861 6661	6.560 6361	6.815 9086	6.975 6094	7.092 1149	7.183 8853	45
16	5.889 6948	6.566 3884	6.819 1137	6.977 8309	7.093 8147	7.185 2618	44
17	5.916 0238	6.572 0656	6.822 2954	6.980 0410	7.095 5079	7.186 6340	43
18	5.940 8474	6.577 6695	6.825 4539	6.982 2400	7.097 1945	7.188 0018	42
19	5.964 3285	6.583 2019	6.828 5896	6.984 4279	7.098 8745	7.189 3654	41
20	5.986 6049	6.588 6648	6.831 7029	6.986 6048	7.100 5481	7.190 7247	40
21	6.007 7942	6.594 0599	6.834 7939	6.988 7709	7.102 2153	7.192 0797	39
22	6.027 9975	6.599 3887	6.837 8632	6.990 9262	7.103 8760	7.193 4306	38
23	6.047 3027	6.604 6529	6.840 9109	6.993 0708	7.105 5305	7.194 7772	37
24	6.065 7861	6.609 8541	6.843 9373	6.995 2050	7.107 1787	7.196 1197	36
25	6.083 5149	6.614 9938	6.846 9428	6.997 3287	7.108 8206	7.197 4580	35
26	6.100 5482	6.620 0733	6.849 9277	6.999 4420	7.110 4564	7.198 7923	34
27	6.116 9386	6.625 0941	6.852 8922	7.001 5451	7.112 0860	7.200 1224	33
28	6.132 7329	6.630 0575	6.855 8365	7.003 6381	7.113 7095	7.201 4485	32
29	6.147 9729	6.634 9649	6.858 7611	7.005 7211	7.115 3270	7.202 7706	31
30	6.162 6961	6.639 8174	6.861 6661	7.007 7941	7.116 9385	7.204 0886	30
31	6.176 9366	6.644 6162	6.864 5518	7.009 8572	7.118 5440	7.205 4027	29
32	6.190 7248	6.649 3627	6.867 4184	7.011 9107	7.120 1436	7.206 7128	28
33	6.204 0888	6.654 0578	6.870 2663	7.013 9544	7.121 7374	7.208 0189	27
34	6.217 0538	6.658 7027	6.873 0955	7.015 9886	7.123 3253	7.209 3211	26
35	6.229 6429	6.663 2985	6.875 9065	7.018 0132	7.124 9074	7.210 6195	25
36	6.241 8774	6.667 8461	6.878 6994	7.020 0285	7.126 4838	7.211 9140	24
37	6.253 7766	6.672 3466	6.881 4745	7.022 0345	7.128 0545	7.213 2046	23
38	6.265 3585	6.676 8009	6.884 2319	7.024 0313	7.129 6195	7.214 4914	22
39	6.276 6395	6.681 2100	6.886 9719	7.026 0189	7.131 1789	7.215 7744	21
40	6.287 6349	6.685 5748	6.889 6948	7.027 9975	7.132 7328	7.217 0536	20
41	6.298 3587	6.689 8962	6.892 4007	7.029 9671	7.134 2811	7.218 3290	19
42	6.308 8242	6.694 1750	6.895 0898	7.031 9278	7.135 8238	7.219 6008	18
43	6.319 0433	6.698 4121	6.897 7624	7.033 8796	7.137 3612	7.220 8688	17
44	6.329 0275	6.702 6082	6.900 4187	7.035 8228	7.138 8931	7.222 1331	16
45	6.338 7874	6.706 7641	6.903 0588	7.037 7573	7.140 4196	7.223 3938	15
46	6.348 3327	6.710 8807	6.905 6829	7.039 6832	7.141 9408	7.224 6508	14
47	6.357 6727	6.714 9586	6.908 2913	7.041 6006	7.143 4566	7.225 9041	13
48	6.366 8161	6.718 9986	6.910 8841	7.043 5096	7.144 9672	7.227 1539	12
49	6.375 7709	6.723 0013	6.913 4615	7.045 4103	7.146 4726	7.228 4001	11
50	6.384 5449	6.726 9675	6.916 0237	7.047 3026	7.147 9727	7.229 6427	10
51	6.393 1450	6.730 8978	6.918 5709	7.049 1868	7.149 4677	7.230 8818	9
52	6.401 5782	6.734 7929	6.921 1033	7.051 0628	7.150 9576	7.232 1173	8
53	6.409 8507	6.738 6533	6.923 6209	7.052 9307	7.152 4423	7.233 3494	7
54	6.417 9686	6.742 4797	6.926 1241	7.054 7906	7.153 9221	7.234 5779	6
55	6.425 9376	6.746 2727	6.928 6129	7.056 6426	7.155 3967	7.235 8030	5
56	6.433 7629	6.750 0328	6.931 0875	7.058 4868	7.156 8664	7.237 0246	4
57	6.441 4497	6.753 7607	6.933 5481	7.060 3231	7.158 3312	7.238 2429	3
58	6.449 0029	6.757 4569	6.935 9948	7.062 1517	7.159 7910	7.239 4577	2
59	6.456 4269	6.761 1218	6.938 4278	7.063 9727	7.161 2459	7.240 6691	1
60	6.463 7261	6.764 7561	6.940 8473	7.065 7860	7.162 6960	7.241 8771	0
″	59′	58′	57′	56′	55′	54′	″

cos 89°

tang 0°

″	0′	1′	2′	3′	4′	5′	″
0	—	6.463 7261	6.764 7562	6.940 8475	7.065 7863	7.162 6964	60
1	4.685 5749	6.470 9047	6.768 3603	6.943 2536	7.067 5921	7.164 1417	59
2	4.986 6049	6.477 9666	6.771 9347	6.945 6464	7.069 3904	7.165 5821	58
3	5.162 6961	6.484 9154	6.775 4800	6.948 0261	7.071 1813	7.167 0178	57
4	5.287 6349	6.491 7549	6.778 9966	6.950 3928	7.072 9649	7.168 4488	56
5	5.384 5449	6.498 4882	6.782 4849	6.952 7467	7.074 7412	7.169 8750	55
6	5.463 7261	6.505 1188	6.785 9455	6.955 0879	7.076 5102	7.171 2966	54
7	5.530 6729	6.511 6497	6.789 3786	6.957 4166	7.078 2720	7.172 7136	53
8	5.588 6649	6.518 0838	6.792 7849	6.959 7328	7.080 0268	7.174 1259	52
9	5.639 8174	6.524 4240	6.796 1646	6.962 0368	7.081 7744	7.175 5337	51
10	5.685 5749	6.530 6729	6.799 5183	6.964 3286	7.083 5151	7.176 9369	50
11	5.726 9676	6.536 8332	6.802 8462	6.966 6084	7.085 2488	7.178 3356	49
12	5.764 7561	6.542 9074	6.806 1489	6.968 8762	7.086 9756	7.179 7298	48
13	5.799 5182	6.548 8977	6.809 4266	6.971 1323	7.088 6956	7.181 1195	47
14	5.831 7029	6.554 8066	6.812 6797	6.973 3767	7.090 4088	7.182 5049	46
15	5.861 6661	6.560 6361	6.815 9087	6.975 6096	7.092 1153	7.183 8858	45
16	5.889 6949	6.566 3885	6.819 1138	6.977 8311	7.093 8151	7.185 2623	44
17	5.916 0238	6.572 0656	6.822 2955	6.980 0412	7.095 5082	7.186 6345	43
18	5.940 8474	6.577 6695	6.825 4540	6.982 2402	7.097 1948	7.188 0023	42
19	5.964 3285	6.583 2020	6.828 5897	6.984 4281	7.098 8749	7.189 3659	41
20	5.986 6049	6.588 6649	6.831 7030	6.986 6050	7.100 5484	7.190 7252	40
21	6.007 7942	6.594 0599	6.834 7940	6.988 7711	7.102 2156	7.192 0802	39
22	6.027 9975	6.599 3887	6.837 8633	6.990 9264	7.103 8764	7.193 4311	38
23	6.047 3027	6.604 6530	6.840 9110	6.993 0710	7.105 5309	7.194 7777	37
24	6.065 7861	6.609 8542	6.843 9374	6.995 2052	7.107 1790	7.196 1202	36
25	6.083 5149	6.614 9938	6.846 9429	6.997 3289	7.108 8210	7.197 4586	35
26	6.100 5482	6.620 0733	6.849 9278	6.999 4422	7.110 4567	7.198 7928	34
27	6.116 9386	6.625 0941	6.852 8923	7.001 5454	7.112 0864	7.200 1230	33
28	6.132 7329	6.630 0576	6.855 8367	7.003 6383	7.113 7099	7.201 4491	32
29	6.147 9729	6 634 9649	6.858 7612	7.005 7213	7.115 3274	7.202 7711	31
30	6.162 6961	6.639 8174	6.861 6662	7.007 7943	7.116 9389	7.204 0892	30
31	6.176 9366	6.644 6163	6.864 5519	7.009 8575	7.118 5444	7.205 4032	29
32	6.190 7248	6.649 3627	6.867 4185	7.011 9109	7.120 1440	7.206 7133	28
33	6.204 0888	6.654 0578	6.870 2664	7.013 9546	7.121 7378	7.208 0195	27
34	6.217 0538	6.658 7028	6.873 0957	7.015 9888	7.123 3257	7.209 3217	26
35	6.229 6429	6.663 2985	6.875 9066	7.018 0135	7.124 9078	7.210 6201	25
36	6.241 8774	6.667 8461	6.878 6995	7.020 0288	7.126 4842	7.211 9145	24
37	6.253 7766	6.672 3466	6.881 4746	7.022 0348	7.128 0549	7.213 2052	23
38	6.265 3585	6.676 8010	6.884 2320	7.024 0315	7.129 6199	7.214 4920	22
39	6.276 6395	6.681 2101	6.886 9721	7.026 0191	7.131 1793	7.215 7750	21
40	6.287 6349	6.685 5749	6.889 6949	7.027 9977	7.132 7332	7.217 0542	20
41	6.298 3587	6.689 8963	6.892 4008	7.029 9673	7.134 2815	7.218 3296	19
42	6.308 8242	6.694 1751	6.895 0900	7.031 9280	7.135 8242	7.219 6014	18
43	6.319 0433	6.698 4121	6.897 7626	7.033 8799	7.137 3616	7.220 8694	17
44	6.329 0275	6.702 6082	6.900 4188	7.035 8231	7.138 8935	7.222 1337	16
45	6.338 7874	6.706 7642	6.903 0589	7.037 7576	7.140 4200	7.223 3944	15
46	6.348 3327	6 710 8808	6.905 6830	7.039 6835	7.141 9412	7.224 6514	14
47	6.357 6727	6.714 9587	6.908 2914	7.041 6009	7.143 4570	7.225 9048	13
48	6.366 8161	6.718 9987	6.910 8842	7.043 5099	7.144 9676	7.227 1545	12
49	6.375 7710	6.723 0014	6.913 4617	7.045 4105	7.146 4730	7.228 4007	11
50	6.384 5449	6.726 9676	6.916 0239	7.047 3029	7.147 9732	7.229 6433	10
51	6.393 1451	6.730 8979	6.918 5711	7.049 1870	7.149 4681	7.230 8824	9
52	6.401 5782	6.734 7929	6.921 1034	7.051 0630	7.150 9580	7.232 1180	8
53	6.409 8507	6.738 6534	6.923 6211	7.052 9310	7.152 4428	7.233 3500	7
54	6.417 9686	6.742 4798	6.926 1242	7.054 7909	7.153 9225	7.234 5786	6
55	6.425 9376	6.746 2728	6.928 6130	7.056 6429	7.155 3972	7.235 8036	5
56	6.433 7629	6.750 0329	6.931 0876	7.058 4871	7.156 8669	7.237 0253	4
57	6 441 4497	6.753 7608	6.933 5482	7.060 3234	7.158 3316	7.238 2435	3
58	6.449 0029	6.757 4569	6.935 9950	7.062 1520	7.159 7914	7.239 4583	2
59	6.456 4269	6.761 1219	6.938 4280	7.063 9730	7.161 2464	7.240 6698	1
60	6.463 7261	6.764 7562	6.940 8475	7.065 7863	7.162 6964	7.241 8778	0
″	59′	58′	57′	56′	55′	54′	″

cotg 89°

sin 0°

″	6′	7′	8′	9′	10′	11′	″
0	7·241 8771	7·308 8239	7·366 8157	7·417 9681	7·463 7255	7·505 1181	60
1	7·243 0818	7·309 8567	7·367 7195	7·418 7716	7·464 4487	7·505 7756	59
2	7·244 2832	7·310 8870	7·368 6215	7·419 5737	7·465 1707	7·506 4321	58
3	7·245 4813	7·311 9149	7·369 5216	7·420 3742	7·465 8916	7·507 0876	57
4	7·246 6760	7·312 9404	7·370 4198	7·421 1733	7·466 6112	7·507 7422	56
5	7·247 8675	7·313 9635	7·371 3162	7·421 9709	7·467 3296	7·508 3958	55
6	7·249 0557	7·314 9842	7·372 2107	7·422 7670	7·468 0469	7·509 0483	54
7	7·250 2407	7·316 0024	7·373 1034	7·423 5617	7·468 7629	7·509 6999	53
8	7·251 4225	7·317 0183	7·373 9943	7·424 3549	7·469 4778	7·510 3506	52
9	7·252 6010	7·318 0318	7·374 8833	7·425 1467	7·470 1915	7·511 0002	51
10	7·253 7764	7·319 0430	7·375 7705	7·425 9370	7·470 9041	7·511 6489	50
11	7·254 9485	7·320 0518	7·376 6559	7·426 7259	7·471 6154	7·512 2966	49
12	7·256 1176	7·321 0583	7·377 5396	7·427 5134	7·472 3257	7·512 9434	48
13	7·257 2835	7·322 0624	7·378 4214	7·428 2995	7·473 0347	7·513 5892	47
14	7·258 4462	7·323 0643	7·379 3014	7·429 0841	7·473 7426	7·514 2340	46
15	7·259 6059	7·324 0638	7·380 1796	7·429 8673	7·474 4493	7·514 8779	45
16	7·260 7625	7·325 0610	7·381 0561	7·430 6491	7·475 1549	7·515 5208	44
17	7·261 9160	7·326 0560	7·381 9308	7·431 4295	7·475 8594	7·516 1628	43
18	7·263 0664	7·327 0487	7·382 8038	7·432 2085	7·476 5627	7·516 8038	42
19	7·264 2138	7·328 0391	7·383 6750	7·432 9861	7·477 2649	7·517 4439	41
20	7·265 3582	7·329 0272	7·384 5444	7·433 7624	7·477 9659	7·518 0830	40
21	7·266 4996	7·330 0131	7·385 4122	7·434 5372	7·478 6658	7·518 7212	39
22	7·267 6380	7·330 9968	7·386 2782	7·435 3106	7·479 3646	7·519 3585	38
23	7·268 7734	7·331 9783	7·387 1424	7·436 0827	7·480 0623	7·519 9948	37
24	7·269 9058	7·332 9575	7·388 0050	7·436 8534	7·480 7588	7·520 6302	36
25	7·271 0353	7·333 9345	7·388 8658	7·437 6228	7·481 4542	7·521 2646	35
26	7·272 1619	7·334 9094	7·389 7249	7·438 3908	7·482 1485	7·521 8982	34
27	7·273 2856	7·335 8821	7·390 5824	7·439 1574	7·482 8417	7·522 5308	33
28	7·274 4063	7·336 8525	7·391 4381	7·439 9227	7·483 5338	7·523 1625	32
29	7·275 5242	7·337 8209	7·392 2922	7·440 6866	7·484 2248	7·523 7933	31
30	7·276 6392	7·338 7870	7·393 1446	7·441 4492	7·484 9147	7·524 4231	30
31	7·277 7514	7·339 7511	7·393 9953	7·442 2104	7·485 6035	7·525 0521	29
32	7·278 8607	7·340 7130	7·394 8444	7·442 9703	7·486 2913	7·525 6801	28
33	7·279 9672	7·341 6727	7·395 6918	7·443 7289	7·486 9779	7·526 3073	27
34	7·281 0708	7·342 6304	7·396 5375	7·444 4862	7·487 6634	7·526 9335	26
35	7·282 1717	7·343 5859	7·397 3816	7·445 2421	7·488 3479	7·527 5588	25
36	7·283 2698	7·344 5394	7·398 2241	7·445 9968	7·489 0313	7·528 1833	24
37	7·284 3651	7·345 4907	7·399 0650	7·446 7501	7·489 7136	7·528 8068	23
38	7·285 4577	7·346 4400	7·399 9042	7·447 5021	7·490 3949	7·529 4295	22
39	7·286 5475	7·347 3872	7·400 7418	7·448 2529	7·491 0750	7·530 0512	21
40	7·287 6346	7·348 3323	7·401 5778	7·449 0023	7·491 7541	7·530 6721	20
41	7·288 7190	7·349 2754	7·402 4121	7·449 7504	7·492 4322	7·531 2920	19
42	7·289 8006	7·350 2165	7·403 2449	7·450 4973	7·493 1092	7·531 9111	18
43	7·290 8796	7·351 1555	7·404 0761	7·451 2428	7·493 7851	7·532 5294	17
44	7·291 9560	7·352 0925	7·404 9057	7·451 9871	7·494 4600	7·533 1467	16
45	7·293 0296	7·353 0275	7·405 7337	7·452 7302	7·495 1339	7·533 7631	15
46	7·294 1006	7·353 9604	7·406 5601	7·453 4719	7·495 8067	7·534 3787	14
47	7·295 1690	7·354 8914	7·407 3850	7·454 2124	7·496 4784	7·534 9934	13
48	7·296 2347	7·355 8203	7·408 2083	7·454 9516	7·497 1492	7·535 6073	12
49	7·297 2979	7·356 7473	7·409 0301	7·455 6896	7·497 8188	7·536 2202	11
50	7·298 3584	7·357 6723	7·409 8503	7·456 4263	7·498 4875	7·536 8324	10
51	7·299 4164	7·358 5954	7·410 6689	7·457 1618	7·499 1551	7·537 4436	9
52	7·300 4718	7·359 5165	7·411 4860	7·457 8960	7·499 8217	7·538 0540	8
53	7·301 5246	7·360 4356	7·412 3016	7·458 6290	7·500 4873	7·538 6635	7
54	7·302 5749	7·361 3528	7·413 1156	7·459 3607	7·501 1519	7·539 2722	6
55	7·303 6227	7·362 2681	7·413 9282	7·460 0912	7·501 8154	7·539 8800	5
56	7·304 6679	7·363 1814	7·414 7392	7·460 8205	7·502 4780	7·540 4870	4
57	7·305 7106	7·364 0929	7·415 5487	7·461 5486	7·503 1395	7·541 0931	3
58	7·306 7509	7·365 0024	7·416 3567	7·462 2754	7·503 8000	7·541 6984	2
59	7·307 7886	7·365 9100	7·417 1631	7·463 0011	7·504 4595	7·542 3029	1
60	7·308 8239	7·366 8157	7·417 9681	7·463 7255	7·505 1181	7·542 9065	0
″	53′	52′	51′	50′	49′	48′	″

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″	6′	7′	8′	9′	10′	11′	″
0	7.241 8778	7.308 8248	7.366 8169	7.417 9696	7.463 7273	7.505 1203	60
1	7.243 0825	7.309 8576	7.367 7207	7.418 7731	7.464 4506	7.505 7778	59
2	7.244 2839	7.310 8879	7.368 6227	7.419 5752	7.465 1726	7.506 4343	58
3	7.245 4819	7.311 9158	7.369 5228	7.420 3757	7.465 8934	7.507 0899	57
4	7.246 6767	7.312 9413	7.370 4210	7.421 1748	7.466 6130	7.507 7444	56
5	7.247 8682	7.313 9644	7.371 3174	7.421 9724	7.467 3315	7.508 3980	55
6	7.249 0564	7.314 9851	7.372 2119	7.422 7685	7.468 0487	7.509 0506	54
7	7.250 2414	7.316 0034	7.373 1046	7.423 5632	7.468 7648	7.509 7022	53
8	7.251 4231	7.317 0193	7.373 9955	7.424 3564	7.469 4797	7.510 3528	52
9	7.252 6017	7.318 0328	7.374 8845	7.425 1482	7.470 1934	7.511 0025	51
10	7.253 7771	7.319 0440	7.375 7718	7.425 9386	7.470 9060	7.511 6512	50
11	7.254 9492	7.320 0528	7.376 6572	7.426 7275	7.471 6173	7.512 2989	49
12	7.256 1183	7.321 0592	7.377 5408	7.427 5150	7.472 3276	7.512 9457	48
13	7.257 2842	7.322 0634	7.378 4226	7.428 3010	7.473 0366	7.513 5915	47
14	7.258 4469	7.323 0652	7.379 3026	7.429 0857	7.473 7445	7.514 2363	46
15	7.259 6066	7.324 0648	7.380 1809	7.429 8689	7.474 4513	7.514 8802	45
16	7.260 7632	7.325 0620	7.381 0574	7.430 6507	7.475 1569	7.515 5231	44
17	7.261 9167	7.326 0570	7.381 9321	7.431 4311	7.475 8613	7.516 1651	43
18	7.263 0672	7.327 0496	7.382 8051	7.432 2101	7.476 5646	7.516 8061	42
19	7.264 2146	7.328 0400	7.383 6763	7.432 9877	7.477 2668	7.517 4462	41
20	7.265 3590	7.329 0282	7.384 5457	7.433 7640	7.477 9679	7.518 0854	40
21	7.266 5003	7.330 0141	7.385 4134	7.434 5388	7.478 6678	7.518 7236	39
22	7.267 6387	7.330 9978	7.386 2794	7.435 3123	7.479 3666	7.519 3608	38
23	7.268 7741	7.331 9793	7.387 1437	7.436 0843	7.480 0642	7.519 9972	37
24	7.269 9066	7.332 9585	7.388 0063	7.436 8551	7.480 7608	7.520 6326	36
25	7.271 0361	7.333 9356	7.388 8671	7.437 6244	7.481 4562	7.521 2670	35
26	7.272 1627	7.334 9104	7.389 7263	7.438 3924	7.482 1505	7.521 9006	34
27	7.273 2863	7.335 8831	7.390 5837	7.439 1590	7.482 8437	7.522 5332	33
28	7.274 4071	7.336 8536	7.391 4395	7.439 9243	7.483 5359	7.523 1649	32
29	7.275 5250	7.337 8219	7.392 2935	7.440 6882	7.484 2269	7.523 7957	31
30	7.276 6400	7.338 7881	7.393 1459	7.441 4508	7.484 9168	7.524 4256	30
31	7.277 7521	7.339 7521	7.393 9967	7.442 2121	7.485 6056	7.525 0545	29
32	7.278 8615	7.340 7140	7.394 8457	7.442 9720	7.486 2933	7.525 6826	28
33	7.279 9679	7.341 6738	7.395 6931	7.443 7306	7.486 9799	7.526 3097	27
34	7.281 0716	7.342 6314	7.396 5389	7.444 4879	7.487 6655	7.526 9360	26
35	7.282 1725	7.343 5870	7.397 3830	7.445 2438	7.488 3500	7.527 5613	25
36	7.283 2706	7.344 5404	7.398 2255	7.445 9985	7.489 0334	7.528 1858	24
37	7.284 3659	7.345 4918	7.399 0663	7.446 7518	7.489 7157	7.528 8093	23
38	7.285 4585	7.346 4411	7.399 9055	7.447 5038	7.490 3969	7.529 4319	22
39	7.286 5483	7.347 3883	7.400 7431	7.448 2546	7.491 0771	7.530 0537	21
40	7.287 6354	7.348 3334	7.401 5791	7.449 0040	7.491 7562	7.530 6746	20
41	7.288 7198	7.349 2765	7.402 4135	7.449 7521	7.492 4343	7.531 2946	19
42	7.289 8015	7.350 2176	7.403 2463	7.450 4990	7.493 1113	7.531 9137	18
43	7.290 8805	7.351 1566	7.404 0775	7.451 2446	7.493 7872	7.532 5319	17
44	7.291 9568	7.352 0936	7.404 9071	7.451 9889	7.494 4621	7.533 1492	16
45	7.293 0304	7.353 0286	7.405 7351	7.452 7319	7.495 1360	7.533 7657	15
46	7.294 1015	7.353 9615	7.406 5616	7.453 4737	7.495 8088	7.534 3813	14
47	7.295 1698	7.354 8925	7.407 3864	7.454 2141	7.496 4806	7.534 9960	13
48	7.296 2356	7.355 8215	7.408 2097	7.454 9534	7.497 1513	7.535 6098	12
49	7.297 2987	7.356 7485	7.409 0315	7.455 6913	7.497 8210	7.536 2228	11
50	7.298 3593	7.357 6735	7.409 8517	7.456 4281	7.498 4897	7.536 8349	10
51	7.299 4173	7.358 5965	7.410 6703	7.457 1635	7.499 1573	7.537 4462	9
52	7.300 4727	7.359 5176	7.411 4875	7.457 8978	7.499 8239	7.538 0566	8
53	7.301 5255	7.360 4368	7.412 3030	7.458 6308	7.500 4895	7.538 6661	7
54	7.302 5758	7.361 3540	7.413 1171	7.459 3625	7.501 1541	7.539 2748	6
55	7.303 6235	7.362 2692	7.413 9296	7.460 0930	7.501 8176	7.539 8826	5
56	7.304 6688	7.363 1826	7.414 7406	7.460 8223	7.502 4802	7.540 4896	4
57	7.305 7115	7.364 0940	7.415 5501	7.461 5504	7.503 1417	7.541 0958	3
58	7.306 7517	7.365 0035	7.416 3581	7.462 2773	7.503 8022	7.541 7011	2
59	7.307 7895	7.365 9112	7.417 1646	7.463 0029	7.504 4618	7.542 3055	1
60	7.308 8248	7.366 8169	7.417 9696	7.463 7273	7.505 1203	7.542 9091	0
″	53′	52′	51′	50′	49′	48′	″

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″	12′	13′	14′	15′	16′	17′	″
0	7.542 9065	7.577 6684	7.609 8530	7.639 8160	7.667 8445	7.694 1733	60
1	7.543 5092	7.578 2249	7.610 3697	7.640 2983	7.668 2967	7.694 5988	59
2	7.544 1112	7.578 7806	7.610 8858	7.640 7800	7.668 7484	7.695 0240	58
3	7.544 7123	7.579 3356	7.611 4012	7.641 2612	7.669 1996	7.695 4487	57
4	7.545 3125	7.579 8899	7.611 9161	7.641 7419	7.669 6503	7.695 8730	56
5	7.545 9120	7.580 4435	7.612 4304	7.642 2221	7.670 1006	7.696 2969	55
6	7.546 5106	7.580 9964	7.612 9440	7.642 7017	7.670 5504	7.696 7204	54
7	7.547 1084	7.581 5485	7.613 4571	7.643 1808	7.670 9998	7.697 1435	53
8	7.547 7053	7.582 1000	7.613 9695	7.643 6593	7.671 4486	7.697 5662	52
9	7.548 3015	7.582 6508	7.614 4813	7.644 1373	7.671 8970	7.697 9884	51
10	7.548 8968	7.583 2009	7.614 9926	7.644 6149	7.672 3450	7.698 4103	50
11	7.549 4913	7.583 7503	7.615 5032	7.645 0918	7.672 7925	7.698 8317	49
12	7.550 0850	7.584 2990	7.616 0132	7.645 5683	7.673 2395	7.699 2528	48
13	7.550 6779	7.584 8470	7.616 5227	7.646 0442	7.673 6861	7.699 6734	47
14	7.551 2700	7.585 3943	7.617 0315	7.646 5196	7.674 1322	7.700 0936	46
15	7.551 8613	7.585 9409	7.617 5397	7.646 9945	7.674 5779	7.700 5134	45
16	7.552 4518	7.586 4869	7.618 0474	7.647 4689	7.675 0231	7.700 9328	44
17	7.553 0414	7.587 0321	7.618 5544	7.647 9428	7.675 4678	7.701 3518	43
18	7.553 6303	7.587 5767	7.619 0609	7.648 4161	7.675 9121	7.701 7704	42
19	7.554 2184	7.588 1206	7.619 5668	7.648 8889	7.676 3559	7.702 1886	41
20	7.554 8057	7.588 6638	7.620 0721	7.649 3613	7.676 7993	7.702 6064	40
21	7.555 3921	7.589 2063	7.620 5768	7.649 8331	7.677 2422	7.703 0238	39
22	7.555 9778	7.589 7481	7.621 0809	7.650 3043	7.677 6847	7.703 4407	38
23	7.556 5627	7.590 2893	7.621 5844	7.650 7751	7.678 1267	7.703 8573	37
24	7.557 1469	7.590 8298	7.622 0873	7.651 2454	7.678 5683	7.704 2735	36
25	7.557 7302	7.591 3696	7.622 5897	7.651 7151	7.679 0094	7.704 6893	35
26	7.558 3127	7.591 9088	7.623 0915	7.652 1844	7.679 4501	7.705 1047	34
27	7.558 8945	7.592 4473	7.623 5927	7.652 6531	7.679 8904	7.705 5197	33
28	7.559 4755	7.592 9851	7.624 0933	7.653 1214	7.680 3302	7.705 9343	32
29	7.560 0557	7.593 5223	7.624 5934	7.653 5891	7.680 7695	7.706 3485	31
30	7.560 6352	7.594 0588	7.625 0928	7.654 0563	7.681 2084	7.706 7623	30
31	7.561 2138	7.594 5946	7.625 5917	7.654 5231	7.681 6469	7.707 1757	29
32	7.561 7917	7.595 1298	7.626 0901	7.654 9893	7.682 0849	7.707 5887	28
33	7.562 3689	7.595 6643	7.626 5878	7.655 4550	7.682 5224	7.708 0014	27
34	7.562 9452	7.596 1981	7.627 0850	7.655 9203	7.682 9596	7.708 4136	26
35	7.563 5208	7.596 7313	7.627 5816	7.656 3850	7.683 3963	7.708 8254	25
36	7.564 0957	7.597 2639	7.628 0777	7.656 8492	7.683 8325	7.709 2369	24
37	7.564 6698	7.597 7958	7.628 5732	7.657 3130	7.684 2683	7.709 6480	23
38	7.565 2431	7.598 3270	7.629 0681	7.657 7762	7.684 7037	7.710 0586	22
39	7.565 8157	7.598 8576	7.629 5624	7.658 2390	7.685 1387	7.710 4689	21
40	7.566 3875	7.599 3876	7.630 0562	7.658 7012	7.685 5732	7.710 8788	20
41	7.566 9585	7.599 9169	7.630 5495	7.659 1630	7.686 0072	7.711 2883	19
42	7.567 5289	7.600 4455	7.631 0421	7.659 6243	7.686 4409	7.711 6975	18
43	7.568 0984	7.600 9735	7.631 5342	7.660 0850	7.686 8741	7.712 1062	17
44	7.568 6672	7.601 5009	7.632 0258	7.660 5453	7.687 3069	7.712 5146	16
45	7.569 2353	7.602 0277	7.632 5168	7.661 0052	7.687 7392	7.712 9225	15
46	7.569 8026	7.602 5538	7.633 0073	7.661 4645	7.688 1711	7.713 3301	14
47	7.570 3692	7.603 0792	7.633 4971	7.661 9233	7.688 6026	7.713 7373	13
48	7.570 9351	7.603 6040	7.633 9865	7.662 3817	7.689 0337	7.714 1442	12
49	7.571 5002	7.604 1282	7.634 4753	7.662 8395	7.689 4643	7.714 5506	11
50	7.572 0646	7.604 6518	7.634 9635	7.663 2969	7.689 8945	7.714 9567	10
51	7.572 6282	7.605 1747	7.635 4512	7.663 7538	7.690 3243	7.715 3624	9
52	7.573 1912	7.605 6970	7.635 9384	7.664 2103	7.690 7536	7.715 7677	8
53	7.573 7533	7.606 2187	7.636 4250	7.664 6662	7.691 1826	7.716 1726	7
54	7.574 3148	7.606 7397	7.636 9110	7.665 1217	7.691 6111	7.716 5772	6
55	7.574 8755	7.607 2602	7.637 3965	7.665 5767	7.692 0392	7.716 9814	5
56	7.575 4356	7.607 7800	7.637 8815	7.666 0312	7.692 4668	7.717 3852	4
57	7.575 9949	7.608 2991	7.638 3659	7.666 4852	7.692 8941	7.717 7886	3
58	7.576 5534	7.608 8177	7.638 8498	7.666 9388	7.693 3209	7.718 1917	2
59	7.577 1113	7.609 3356	7.639 3332	7.667 3919	7.693 7473	7.718 5943	1
60	7.577 6684	7.609 8530	7.639 8160	7.667 8445	7.694 1733	7.718 9966	0
″	47′	46′	45′	44′	43′	42′	″

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″	12′	13′	14′	15′	16′	17′	″
0	7.542 9091	7.577 6715	7.609 8566	7.639 8201	7.667 8492	7.694 1786	60
1	7.543 5119	7.578 2280	7.610 3733	7.640 3024	7.668 3014	7.694 6042	59
2	7.544 1138	7.578 7837	7.610 8894	7.640 7842	7.668 7531	7.695 0293	58
3	7.544 7149	7.579 3387	7.611 4049	7.641 2654	7.669 2043	7.695 4541	57
4	7.545 3152	7.579 8930	7.611 9197	7.641 7461	7.669 6551	7.695 8784	56
5	7.545 9147	7.580 4466	7.612 4340	7.642 2262	7.670 1053	7.696 3023	55
6	7.546 5133	7.580 9995	7.612 9477	7.642 7059	7.670 5552	7.696 7258	54
7	7.547 1111	7.581 5517	7.613 4607	7.643 1850	7.671 0045	7.697 1489	53
8	7.547 7080	7.582 1032	7.613 9732	7.643 6635	7.671 4534	7.697 5716	52
9	7.548 3042	7.582 6540	7.614 4850	7.644 1416	7.671 9018	7.697 9938	51
10	7.548 8995	7.583 2041	7.614 9963	7.644 6191	7.672 3498	7.698 4157	50
11	7.549 4941	7.583 7535	7.615 5069	7.645 0961	7.672 7973	7.698 8371	49
12	7.550 0878	7.584 3022	7.616 0169	7.645 5725	7.673 2443	7.699 2582	48
13	7.550 6807	7.584 8502	7.616 5264	7.646 0485	7.673 6909	7.699 6788	47
14	7.551 2728	7.585 3975	7.617 0352	7.646 5239	7.674 1371	7.700 0990	46
15	7.551 8640	7.585 9441	7.617 5435	7.646 9988	7.674 5827	7.700 5189	45
16	7.552 4545	7.586 4901	7.618 0511	7.647 4732	7.675 0279	7.700 9383	44
17	7.553 0442	7.587 0353	7.618 5582	7.647 9471	7.675 4727	7.701 3573	43
18	7.553 6331	7.587 5799	7.619 0647	7.648 4204	7.675 9170	7.701 7759	42
19	7.554 2212	7.588 1238	7.619 5705	7.648 8933	7.676 3608	7.702 1941	41
20	7.554 8084	7.588 6670	7.620 0758	7.649 3656	7.676 8042	7.702 6119	40
21	7.555 3949	7.589 2096	7.620 5805	7.649 8374	7.677 2471	7.703 0293	39
22	7.555 9806	7.589 7514	7.621 0847	7.650 3087	7.677 6896	7.703 4463	38
23	7.556 5656	7.590 2926	7.621 5882	7.650 7795	7.678 1317	7.703 8629	37
24	7.557 1497	7.590 8331	7.622 0911	7.651 2497	7.678 5733	7.704 2791	36
25	7.557 7330	7.591 3730	7.622 5935	7.651 7195	7.679 0144	7.704 6949	35
26	7.558 3156	7.591 9121	7.623 0953	7.652 1888	7.679 4551	7.705 1103	34
27	7.558 8974	7.592 4506	7.623 5965	7.652 6575	7.679 8953	7.705 5253	33
28	7.559 4784	7.592 9884	7.624 0972	7.653 1258	7.680 3351	7.705 9399	32
29	7.560 0586	7.593 5256	7.624 5972	7.653 5935	7.680 7745	7.706 3541	31
30	7.560 6380	7.594 0621	7.625 0967	7.654 0608	7.681 2134	7.706 7679	30
31	7.561 2167	7.594 5980	7.625 5956	7.654 5275	7.681 6519	7.707 1813	29
32	7.561 7946	7.595 1331	7.626 0939	7.654 9937	7.682 0899	7.707 5944	28
33	7.562 3718	7.595 6677	7.626 5917	7.655 4595	7.682 5275	7.708 0070	27
34	7.562 9481	7.596 2015	7.627 0889	7.655 9247	7.682 9646	7.708 4193	26
35	7.563 5238	7.596 7347	7.627 5855	7.656 3895	7.683 4013	7.708 8311	25
36	7.564 0986	7.597 2673	7.628 0816	7.656 8537	7.683 8376	7.709 2426	24
37	7.564 6727	7.597 7992	7.628 5771	7.657 3174	7.684 2734	7.709 6537	23
38	7.565 2460	7.598 3304	7.629 0720	7.657 7807	7.684 7088	7.710 0643	22
39	7.565 8186	7.598 8611	7.629 5664	7.658 2435	7.685 1438	7.710 4746	21
40	7.566 3904	7.599 3910	7.630 0602	7.658 7057	7.685 5783	7.710 8846	20
41	7.566 9615	7.599 9203	7.630 5534	7.659 1675	7.686 0124	7.711 2941	19
42	7.567 5318	7.600 4490	7.631 0461	7.659 6288	7.686 4460	7.711 7032	18
43	7.568 1014	7.600 9770	7.631 5382	7.660 0896	7.686 8792	7.712 1120	17
44	7.568 6702	7.601 5044	7.632 0298	7.660 5499	7.687 3120	7.712 5203	16
45	7.569 2383	7.602 0311	7.632 5208	7.661 0097	7.687 7444	7.712 9283	15
46	7.569 8056	7.602 5572	7.633 0113	7.661 4690	7.688 1763	7.713 3359	14
47	7.570 3722	7.603 0827	7.633 5012	7.661 9279	7.688 6078	7.713 7432	13
48	7.570 9381	7.603 6075	7.633 9905	7.662 3863	7.689 0389	7.714 1500	12
49	7.571 5032	7.604 1317	7.634 4793	7.662 8441	7.689 4695	7.714 5565	11
50	7.572 0676	7.604 6553	7.634 9676	7.663 3015	7.689 8997	7.714 9625	10
51	7.572 6313	7.605 1782	7.635 4553	7.663 7585	7.690 3295	7.715 3682	9
52	7.573 1942	7.605 7005	7.635 9424	7.664 2149	7.690 7589	7.715 7736	8
53	7.573 7564	7.606 2222	7.636 4290	7.664 6709	7.691 1878	7.716 1785	7
54	7.574 3179	7.606 7433	7.636 9151	7.665 1263	7.691 6163	7.716 5831	6
55	7.574 8786	7.607 2637	7.637 4006	7.665 5813	7.692 0444	7.716 9873	5
56	7.575 4386	7.607 7835	7.637 8856	7.666 0359	7.692 4721	7.717 3911	4
57	7.575 9979	7.608 3027	7.638 3700	7.666 4899	7.692 8993	7.717 7945	3
58	7.576 5565	7.608 8213	7.638 8539	7.666 9435	7.693 3262	7.718 1976	2
59	7.577 1144	7.609 3392	7.639 3373	7.667 3966	7.693 7526	7.718 6003	1
60	7.577 6715	7.609 8566	7.639 8201	7.667 8492	7.694 1786	7.719 0026	0
″	47′	46′	45′	44′	43′	42′	″

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″	18′	19′	20′	21′	22′	23′	″
0	7·718 9966	7·742 4775	7·764 7537	7·785 9427	7.806 1458	7.825 4507	60
1	7·719 3986	7·742 8583	7·765 1154	7·786 2872	7.806 4747	7.825 7653	59
2	7·719 8001	7·743 2388	7·765 4769	7·786 6315	7.806 8033	7.826 0797	58
3	7·720 2013	7·743 6189	7·765 8380	7·786 9755	7.807 1317	7.826 3938	57
4	7·720 6021	7·743 9987	7·766 1989	7·787 3192	7.807 4599	7.826 7077	56
5	7·721 0026	7·744 3781	7·766 5594	7·787 6627	7.807 7878	7.827 0214	55
6	7·721 4027	7·744 7573	7·766 9197	7·788 0058	7.808 1154	7.827 3348	54
7	7·721 8024	7·745 1360	7·767 2797	7·788 3488	7.808 4428	7.827 6481	53
8	7·722 2017	7·745 5145	7·767 6393	7·788 6914	7.808 7699	7.827 9611	52
9	7·722 6007	7·745 8926	7·767 9987	7·789 0337	7.809 0968	7.828 2738	51
10	7·722 9993	7·746 2705	7·768 3577	7·789 3758	7.809 4235	7.828 5864	50
11	7·723 3976	7·746 6479	7·768 7165	7·789 7177	7.809 7499	7.828 8987	49
12	7·723 7955	7·747 0251	7·769 0750	7·790 0592	7.810 0761	7.829 2108	48
13	7·724 1930	7·747 4019	7·769 4332	7·790 4005	7.810 4020	7.829 5227	47
14	7·724 5902	7·747 7784	7·769 7910	7·790 7415	7.810 7277	7.829 8343	46
15	7·724 9869	7·748 1546	7·770 1486	7·791 0823	7.811 0531	7.830 1458	45
16	7·725 3834	7·748 5304	7·770 5059	7·791 4228	7.811 3783	7.830 4570	44
17	7·725 7794	7·748 9059	7·770 8629	7·791 7630	7.811 7032	7.830 7680	43
18	7·726 1752	7·749 2811	7·771 2196	7·792 1029	7.812 0279	7.831 0787	42
19	7·726 5705	7·749 6560	7·771 5760	7·792 4426	7.812 3524	7.831 3893	41
20	7·726 9655	7·750 0306	7·771 9322	7·792 7820	7.812 6766	7.831 6996	40
21	7·727 3601	7·750 4048	7·772 2880	7·793 1212	7.813 0006	7.832 0097	39
22	7·727 7544	7·750 7787	7·772 6435	7·793 4601	7.813 3243	7.832 3195	38
23	7·728 1483	7·751 1523	7·772 9988	7·793 7987	7.813 6478	7.832 6292	37
24	7·728 5419	7·751 5255	7·773 3537	7·794 1371	7.813 9711	7.832 9386	36
25	7·728 9351	7·751 8985	7·773 7084	7·794 4752	7.814 2941	7.833 2478	35
26	7·729 3279	7·752 2711	7·774 0628	7·794 8130	7.814 6168	7.833 5568	34
27	7·729 7204	7·752 6434	7·774 4169	7·795 1506	7.814 9394	7.833 8656	33
28	7·730 1125	7·753 0154	7·774 7707	7·795 4879	7.815 2617	7.834 1741	32
29	7·730 5043	7·753 3871	7·775 1242	7·795 8250	7.815 5837	7.834 4825	31
30	7·730 8957	7·753 7584	7·775 4774	7·796 1617	7.815 9055	7.834 7906	30
31	7·731 2868	7·754 1294	7·775 8303	7·796 4983	7.816 2271	7.835 0985	29
32	7·731 6776	7·754 5001	7·776 1830	7·796 8345	7.816 5484	7.835 4062	28
33	7·732 0679	7·754 8705	7·776 5354	7·797 1705	7.816 8695	7.835 7136	27
34	7·732 4579	7·755 2406	7·776 8874	7·797 5063	7.817 1904	7.836 0209	26
35	7·732 8476	7·755 6104	7·777 2392	7·797 8418	7.817 5110	7.836 3279	25
36	7·733 2369	7·755 9798	7·777 5907	7·798 1770	7.817 8314	7.836 6347	24
37	7·733 6259	7·756 3490	7·777 9420	7·798 5120	7.818 1516	7.836 9413	23
38	7·734 0145	7·756 7178	7·778 2929	7·798 8467	7.818 4715	7.837 2477	22
39	7·734 4028	7·757 0863	7·778 6436	7·799 1811	7.818 7912	7.837 5538	21
40	7·734 7908	7·757 4545	7·778 9939	7·799 5153	7.819 1106	7.837 8598	20
41	7·735 1783	7·757 8224	7·779 3440	7·799 8493	7.819 4298	7.838 1655	19
42	7·735 5656	7·758 1900	7·779 6938	7.800 1830	7.819 7488	7.838 4710	18
43	7·735 9525	7·758 5572	7·780 0434	7.800 5164	7.820 0676	7.838 7763	17
44	7·736 3390	7·758 9242	7·780 3926	7.800 8496	7.820 3861	7.839 0814	16
45	7·736 7252	7·759 2908	7·780 7416	7.801 1825	7.820 7043	7.839 3863	15
46	7·737 1111	7·759 6572	7·781 0903	7.801 5151	7.821 0224	7.839 6909	14
47	7·737 4966	7·760 0232	7·781 4387	7.801 8475	7.821 3402	7.839 9954	13
48	7·737 8818	7·760 3889	7·781 7868	7.802 1797	7.821 6578	7.840 2996	12
49	7·738 2666	7·760 7543	7·782 1347	7.802 5116	7.821 9751	7.840 6036	11
50	7·738 6511	7·761 1194	7·782 4822	7.802 8432	7.822 2922	7.840 9074	10
51	7·739 0353	7·761 4842	7·782 8295	7.803 1746	7.822 6091	7.841 2110	9
52	7·739 4191	7·761 8487	7·783 1765	7.803 5058	7.822 9258	7.841 5144	8
53	7·739 8026	7·762 2129	7·783 5233	7.803 8367	7.823 2422	7.841 8176	7
54	7·740 1857	7·762 5768	7·783 8697	7.804 1673	7.823 5584	7.842 1205	6
55	7·740 5685	7·762 9403	7·784 2159	7.804 4977	7.823 8743	7.842 4233	5
56	7·740 9510	7·763 3036	7·784 5618	7.804 8278	7.824 1901	7.842 7258	4
57	7·741 3331	7·763 6666	7·784 9075	7.805 1577	7.824 5056	7.843 0281	3
58	7·741 7149	7·764 0292	7·785 2528	7.805 4873	7.824 8209	7.843 3302	2
59	7·742 0964	7·764 3916	7·785 5979	7.805 8167	7.825 1359	7.843 6321	1
60	7·742 4775	7·764 7537	7·785 9427	7.806 1458	7.825 4507	7.843 9338	0
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″	18′	19′	20′	21′	22′	23′	″
0	7.719 0026	7.742 4841	7.764 7610	7.785 9508	7.806 1547	7.825 4604	60
1	7.719 4045	7.742 8649	7.765 1228	7.786 2954	7.806 4836	7.825 7750	59
2	7.719 8061	7.743 2454	7.765 4843	7.786 6396	7.806 8123	7.826 0894	58
3	7.720 2073	7.743 6255	7.765 8454	7.786 9836	7.807 1407	7.826 4036	57
4	7.720 6081	7.744 0053	7.766 2063	7.787 3274	7.807 4688	7.826 7175	56
5	7.721 0086	7.744 3848	7.766 5669	7.787 6708	7.807 7967	7.827 0312	55
6	7.721 4087	7.744 7640	7.766 9271	7.788 0140	7.808 1244	7.827 3446	54
7	7.721 8084	7.745 1428	7.767 2871	7.788 3569	7.808 4518	7.827 6579	53
8	7.722 2078	7.745 5212	7.767 6468	7.788 6996	7.808 7789	7.827 9709	52
9	7.722 6068	7.745 8994	7.768 0061	7.789 0420	7.809 1059	7.828 2837	51
10	7.723 0054	7.746 2772	7.768 3652	7.789 3841	7.809 4325	7.828 5962	50
11	7.723 4037	7.746 6547	7.768 7240	7.789 7259	7.809 7590	7.828 9086	49
12	7.723 8016	7.747 0319	7.769 0825	7.790 0675	7.810 0851	7.829 2207	48
13	7 724 1991	7.747 4087	7.769 4407	7.790 4088	7.810 4111	7.829 5326	47
14	7.724 5963	7.747 7852	7.769 7986	7.790 7498	7.810 7368	7.829 8443	46
15	7.724 9931	7.748 1614	7.770 1562	7.791 0906	7.811 0622	7.830 1557	45
16	7.725 3895	7.748 5372	7.770 5135	7.791 4311	7.811 3874	7.830 4669	44
17	7.725 7856	7.748 9128	7.770 8705	7.791 7713	7.811 7124	7.830 7779	43
18	7.726 1813	7.749 2880	7.771 2272	7.792 1113	7.812 0371	7.831 0887	42
19	7.726 5767	7.749 6629	7.771 5836	7.792 4510	7.812 3615	7.831 3992	41
20	7.726 9717	7.750 0374	7.771 9398	7.792 7904	7.812 6858	7.831 7096	40
21	7.727 3663	7.750 4117	7.772 2956	7.793 1296	7.813 0098	7.832 0197	39
22	7.727 7606	7.750 7856	7.772 6512	7.793 4685	7.813 3335	7.832 3296	38
23	7.728 1545	7.751 1592	7.773 0064	7.793 8071	7.813 6570	7.832 6392	37
24	7.728 5481	7.751 5325	7.773 3614	7.794 1455	7.813 9803	7.832 9487	36
25	7.728 9413	7.751 9054	7.773 7161	7.794 4836	7.814 3033	7.833 2579	35
26	7.729 3342	7.752 2780	7.774 0705	7 794 8215	7.814 6261	7.833 5669	34
27	7.729 7267	7.752 6504	7.774 4246	7.795 1590	7.814 9486	7.833 8757	33
28	7.730 1188	7.753 0224	7.774 7784	7.795 4964	7.815 2709	7.834 1843	32
29	7.730 5106	7.753 3940	7.775 1319	7.795 8334	7.815 5930	7.834 4926	31
30	7.730 9020	7.753 7654	7.775 4851	7.796 1702	7.815 9148	7.834 8007	30
31	7.731 2931	7.754 1364	7.775 8381	7.796 5068	7.816 2364	7.835 1087	29
32	7.731 6839	7.754 5072	7.776 1907	7.796 8431	7.816 5578	7.835 4163	28
33	7.732 0742	7.754 8776	7.776 5431	7.797 1791	7.816 8789	7.835 7238	27
34	7.732 4643	7.755 2477	7.776 8952	7.797 5148	7.817 1998	7.836 0311	26
35	7.732 8540	7.755 6174	7.777 2470	7.797 8503	7.817 5204	7.836 3381	25
36	7.733 2433	7.755 9869	7.777 5985	7.798 1856	7.817 8408	7.836 6449	24
37	7.733 6323	7.756 3560	7.777 9498	7.798 5206	7.818 1610	7.836 9515	23
38	7.734 0209	7.756 7249	7.778 3007	7.798 8553	7.818 4809	7.837 2579	22
39	7.734 4092	7.757 0934	7.778 6514	7.799 1898	7.818 8006	7.837 5641	21
40	7.734 7972	7.757 4616	7.779 0018	7.799 5240	7.819 1201	7.837 8701	20
41	7.735 1848	7.757 8295	7.779 3519	7.799 8579	7.819 4393	7.838 1758	19
42	7.735 5720	7.758 1971	7.779 7017	7.800 1916	7.819 7583	7.838 4813	18
43	7.735 9589	7.758 5644	7.780 0513	7.800 5251	7.820 0770	7.838 7867	17
44	7.736 3455	7.758 9313	7.780 4005	7.800 8582	7.820 3956	7.839 0918	16
45	7.736 7317	7.759 2980	7.780 7495	7.801 1912	7.820 7139	7.839 3966	15
46	7.737 1176	7.759 6643	7.781 0982	7.801 5238	7.821 0319	7.839 7013	14
47	7.737 5031	7.760 0304	7.781 4466	7.801 8563	7.821 3497	7.840 0058	13
48	7.737 8883	7.760 3961	7.781 7948	7.802 1884	7.821 6673	7.840 3100	12
49	7.738 2731	7.760 7615	7.782 1426	7.802 5203	7.821 9847	7.840 6140	11
50	7.738 6577	7.761 1266	7.782 4902	7.802 8520	7.822 3018	7.840 9179	10
51	7.739 0418	7.761 4915	7.782 8375	7.803 1834	7.822 6187	7.841 2215	9
52	7.739 4257	7.761 8560	7.783 1845	7.803 5146	7.822 9354	7.841 5249	8
53	7.739 8091	7.762 2202	7.783 5313	7.803 8455	7.823 2518	7.841 8280	7
54	7.740 1923	7.762 5840	7.783 8778	7.804 1761	7.823 5680	7.842 1310	6
55	7.740 5751	7.762 9476	7.784 2240	7.804 5065	7.823 8840	7.842 4338	5
56	7.740 9576	7.763 3109	7.784 5699	7.804 8366	7.824 1997	7.842 7363	4
57	7.741 3397	7.763 6739	7.784 9155	7.805 1665	7.824 5153	7.843 0387	3
58	7.741 7215	7.764 0366	7.785 2609	7.805 4962	7.824 8305	7.843 3408	2
59	7.742 1030	7.764 3989	7.785 6060	7.805 8256	7.825 1456	7.843 6427	1
60	7.742 4841	7.764 7610	7.785 9508	7.806 1547	7.825 4604	7.843 9444	0
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″	24′	25′	26′	27′	28′	29′	″
0	7.843 9338	7.861 6623	7.878 6953	7.895 0854	7.910 8793	7.926 1190	60
1	7.844 2353	7.861 9517	7.878 9736	7.895 3534	7.911 1378	7.926 3685	59
2	7.844 5366	7.862 2410	7.879 2517	7.895 6212	7.911 3960	7.926 6179	58
3	7.844 8377	7.862 5300	7.879 5297	7.895 8889	7.911 6542	7.926 8671	57
4	7.845 1385	7.862 8189	7.879 8075	7.896 1564	7.911 9121	7.927 1162	56
5	7.845 4392	7.863 1075	7.880 0850	7.896 4237	7.912 1699	7.927 3651	55
6	7.845 7396	7.863 3960	7.880 3625	7.896 6909	7.912 4276	7.927 6139	54
7	7.846 0398	7.863 6843	7.880 6397	7.896 9579	7.912 6851	7.927 8626	53
8	7.846 3399	7.863 9723	7.880 9167	7.897 2248	7.912 9425	7.928 1111	52
9	7.846 6397	7.864 2602	7.881 1936	7.897 4914	7.913 1997	7.928 3595	51
10	7.846 9393	7.864 5479	7.881 4703	7.897 7580	7.913 4567	7.928 6077	50
11	7.847 2387	7.864 8354	7.881 7469	7.898 0243	7.913 7136	7.928 8558	49
12	7.847 5379	7.865 1228	7.882 0232	7.898 2905	7.913 9704	7.929 1037	48
13	7.847 8369	7.865 4099	7.882 2994	7.898 5565	7.914 2269	7.929 3516	47
14	7.848 1357	7.865 6968	7.882 5754	7.898 8224	7.914 4834	7.929 5992	46
15	7.848 4343	7.865 9836	7.882 8512	7.899 0881	7.914 7397	7.929 8467	45
16	7.848 7326	7.866 2702	7.883 1269	7.899 3536	7.914 9958	7.930 0941	44
17	7.849 0308	7.866 5565	7.883 4023	7.899 6190	7.915 2518	7.930 3414	43
18	7.849 3288	7.866 8427	7.883 6776	7.899 8842	7.915 5076	7.930 5885	42
19	7.849 6265	7.867 1287	7.883 9528	7.900 1493	7.915 7633	7.930 8354	41
20	7.849 9241	7.867 4145	7.884 2277	7.900 4141	7.916 0189	7.931 0823	40
21	7.850 2215	7.867 7001	7.884 5025	7.900 6789	7.916 2743	7.931 3289	39
22	7.850 5186	7.867 9856	7.884 7771	7.900 9434	7.916 5295	7.931 5755	38
23	7.850 8156	7.868 2708	7.885 0515	7.901 2078	7.916 7846	7.931 8219	37
24	7.851 1123	7.868 5559	7.885 3258	7.901 4721	7.917 0395	7.932 0682	36
25	7.851 4088	7.868 8408	7.885 5999	7.901 7362	7.917 2943	7.932 3143	35
26	7.851 7052	7.869 1254	7.885 8738	7.902 0001	7.917 5489	7.932 5603	34
27	7.852 0013	7.869 4099	7.886 1475	7.902 2639	7.917 8034	7.932 8061	33
28	7.852 2973	7.869 6942	7.886 4211	7.902 5275	7.918 0578	7.933 0518	32
29	7.852 5930	7.869 9784	7.886 6945	7.902 7909	7.918 3120	7.933 2974	31
30	7.852 8885	7.870 2623	7.886 9677	7.903 0542	7.918 5660	7.933 5428	30
31	7.853 1839	7.870 5461	7.887 2407	7.903 3173	7.918 8199	7.933 7881	29
32	7.853 4790	7.870 8296	7.887 5136	7.903 5803	7.919 0736	7.934 0332	28
33	7.853 7739	7.871 1130	7.887 7863	7.903 8431	7.919 3272	7.934 2783	27
34	7.854 0687	7.871 3962	7.888 0589	7.904 1057	7.919 5807	7.934 5231	26
35	7.854 3632	7.871 6792	7.888 3312	7.904 3682	7.919 8340	7.934 7679	25
36	7.854 6575	7.871 9621	7.888 6034	7.904 6305	7.920 0871	7.935 0125	24
37	7.854 9517	7.872 2447	7.888 8754	7.904 8927	7.920 3401	7.935 2569	23
38	7.855 2456	7.872 5272	7.889 1473	7.905 1547	7.920 5930	7.935 5012	22
39	7.855 5393	7.872 8095	7.889 4190	7.905 4166	7.920 8457	7.935 7454	21
40	7.855 8329	7.873 0916	7.889 6905	7.905 6783	7.921 0983	7.935 9895	20
41	7.856 1262	7.873 3735	7.889 9618	7.905 9398	7.921 3507	7.936 2334	19
42	7.856 4193	7.873 6552	7.890 2330	7.906 2012	7.921 6030	7.936 4772	18
43	7.856 7123	7.873 9367	7.890 5040	7.906 4624	7.921 8551	7.936 7208	17
44	7.857 0050	7.874 2181	7.890 7749	7.906 7235	7.922 1071	7.936 9643	16
45	7.857 2976	7.874 4993	7.891 0455	7.906 9844	7.922 3589	7.937 2077	15
46	7.857 5899	7.874 7803	7.891 3160	7.907 2451	7.922 6106	7.937 4509	14
47	7.857 8821	7.875 0611	7.891 5864	7.907 5057	7.922 8621	7.937 6940	13
48	7.858 1740	7.875 3417	7.891 8565	7.907 7662	7.923 1135	7.937 9369	12
49	7.858 4658	7.875 6222	7.892 1265	7.908 0265	7.923 3648	7.938 1798	11
50	7.858 7574	7.875 9025	7.892 3963	7.908 2866	7.923 6159	7.938 4224	10
51	7.859 0487	7.876 1826	7.892 6660	7.908 5466	7.923 8668	7.938 6650	9
52	7.859 3399	7.876 4625	7.892 9355	7.908 8064	7.924 1177	7.938 9074	8
53	7.859 6309	7.876 7422	7.893 2048	7.909 0660	7.924 3683	7.939 1497	7
54	7.859 9217	7.877 0218	7.893 4740	7.909 3256	7.924 6188	7.939 3918	6
55	7.860 2123	7.877 3011	7.893 7430	7.909 5849	7.924 8692	7.939 6338	5
56	7.860 5027	7.877 5803	7.894 0118	7.909 8441	7.925 1195	7.939 8757	4
57	7.860 7929	7.877 8594	7.894 2804	7.910 1031	7.925 3696	7.940 1175	3
58	7.861 0829	7.878 1382	7.894 5489	7.910 3620	7.925 6195	7.940 3591	2
59	7.861 3727	7.878 4168	7.894 8173	7.910 6208	7.925 8693	7.940 6005	1
60	7.861 6623	7.878 6953	7.895 0854	7.910 8793	7.926 1190	7.940 8419	0
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0	7.843 9444	7.861 6738	7.878 7077	7.895 0988	7.910 8938	7.926 1344	60
1	7.844 2459	7.861 9632	7.878 9861	7.895 3668	7.911 1522	7.926 3840	59
2	7.844 5472	7.862 2525	7.879 2642	7.895 6347	7.911 4105	7.926 6333	58
3	7.844 8483	7.862 5415	7.879 5422	7.895 9023	7.911 6686	7.926 8826	57
4	7.845 1492	7.862 8304	7.879 8199	7.896 1699	7.911 9266	7.927 1317	56
5	7.845 4498	7.863 1191	7.880 0975	7.896 4372	7.912 1844	7.927 3807	55
6	7.845 7503	7.863 4076	7.880 3750	7.896 7044	7.912 4421	7.927 6295	54
7	7.846 0505	7.863 6958	7.880 6522	7.896 9714	7.912 6996	7.927 8782	53
8	7.846 3506	7.863 9839	7.880 9293	7.897 2383	7.912 9570	7.928 1267	52
9	7.846 6504	7.864 2719	7.881 2062	7.897 5050	7.913 2142	7.928 3751	51
10	7.846 9500	7.864 5596	7.881 4829	7.897 7715	7.913 4713	7.928 6233	50
11	7.847 2494	7.864 8471	7.881 7594	7.898 0379	7.913 7282	7.928 8714	49
12	7.847 5487	7.865 1344	7.882 0358	7.898 3041	7.913 9850	7.929 1194	48
13	7.847 8477	7.865 4216	7.882 3120	7.898 5701	7.914 2416	7.929 3672	47
14	7.848 1465	7.865 7085	7.882 5880	7.898 8360	7.914 4980	7.929 6149	46
15	7.848 4451	7.865 9953	7.882 8639	7.899 1017	7.914 7543	7.929 8625	45
16	7.848 7435	7.866 2819	7.883 1395	7.899 3673	7.915 0105	7.930 1099	44
17	7.849 0416	7.866 5683	7.883 4150	7.899 6327	7.915 2665	7.930 3571	43
18	7.849 3396	7.866 8545	7.883 6903	7.899 8979	7.915 5224	7.930 6043	42
19	7.849 6374	7.867 1405	7.883 9655	7.900 1630	7.915 7781	7.930 8512	41
20	7.849 9350	7.867 4263	7.884 2404	7.900 4279	7.916 0336	7.931 0981	40
21	7.850 2323	7.867 7120	7.884 5152	7.900 6926	7.916 2890	7.931 3448	39
22	7.850 5295	7.867 9974	7.884 7899	7.900 9572	7.916 5443	7.931 5913	38
23	7.850 8265	7.868 2827	7.885 0643	7.901 2216	7.916 7994	7.931 8378	37
24	7.851 1232	7.868 5677	7.885 3386	7.901 4859	7.917 0543	7.932 0840	36
25	7.851 4198	7.868 8526	7.885 6127	7.901 7500	7.917 3091	7.932 3302	35
26	7.851 7161	7.869 1373	7.885 8866	7.902 0139	7.917 5638	7.932 5762	34
27	7.852 0123	7.869 4218	7.886 1604	7.902 2777	7.917 8183	7.932 8220	33
28	7.852 3083	7.869 7062	7.886 4339	7.902 5413	7.918 0727	7.933 0678	32
29	7.852 6040	7.869 9903	7.886 7074	7.902 8048	7.918 3269	7.933 3133	31
30	7.852 8996	7.870 2743	7.886 9806	7.903 0681	7.918 5809	7.933 5588	30
31	7.853 1949	7.870 5580	7.887 2537	7.903 3312	7.918 8348	7.933 8041	29
32	7.853 4900	7.870 8416	7.887 5266	7.903 5942	7.919 0886	7.934 0493	28
33	7.853 7850	7.871 1250	7.887 7993	7.903 8570	7.919 3422	7.934 2943	27
34	7.854 0797	7.871 4082	7.888 0718	7.904 1197	7.919 5957	7.934 5392	26
35	7.854 3743	7.871 6913	7.888 3442	7.904 3822	7.919 8490	7.934 7839	25
36	7.854 6686	7.871 9741	7.888 6164	7.904 6445	7.920 1022	7.935 0286	24
37	7.854 9628	7.872 2568	7.888 8885	7.904 9067	7.920 3552	7.935 2730	23
38	7.855 2567	7.872 5393	7.889 1603	7.905 1687	7.920 6081	7.935 5174	22
39	7.855 5505	7.872 8215	7.889 4320	7.905 4306	7.920 8608	7.935 7616	21
40	7.855 8440	7.873 1037	7.889 7036	7.905 6923	7.921 1134	7.936 0057	20
41	7.856 1374	7.873 3856	7.889 9749	7.905 9539	7.921 3658	7.936 2496	19
42	7.856 4305	7.873 6673	7.890 2461	7.906 2153	7.921 6181	7.936 4934	18
43	7.856 7235	7.873 9489	7.890 5171	7.906 4765	7.921 8702	7.936 7370	17
44	7.857 0163	7.874 2303	7.890 7880	7.906 7376	7.922 1222	7.936 9805	16
45	7.857 3088	7.874 5115	7.891 0587	7.906 9985	7.922 3741	7.937 2239	15
46	7.857 6012	7.874 7925	7.891 3292	7.907 2593	7.922 6258	7.937 4672	14
47	7.857 8934	7.875 0733	7.891 5995	7.907 5199	7.922 8774	7.937 7103	13
48	7.858 1853	7.875 3540	7.891 8697	7.907 7804	7.923 1288	7.937 9533	12
49	7.858 4771	7.875 6344	7.892 1397	7.908 0407	7.923 3800	7.938 1961	11
50	7.858 7687	7.875 9147	7.892 4096	7.908 3008	7.923 6312	7.938 4388	10
51	7.859 0601	7.876 1949	7.892 6792	7.908 5608	7.923 8821	7.938 6814	9
52	7.859 3513	7.876 4748	7.892 9487	7.908 8207	7.924 1330	7.938 9238	8
53	7.859 6423	7.876 7545	7.893 2181	7.909 0803	7.924 3836	7.939 1661	7
54	7.859 9331	7.877 0341	7.893 4873	7.909 3399	7.924 6342	7.939 4083	6
55	7.860 2237	7.877 3135	7.893 7563	7.909 5992	7.924 8846	7.939 6503	5
56	7.860 5141	7.877 5927	7.894 0251	7.909 8584	7.925 1348	7.939 8922	4
57	7.860 8043	7.877 8717	7.894 2938	7.910 1175	7.925 3850	7.940 1339	3
58	7.861 0943	7.878 1506	7.894 5623	7.910 3764	7.925 6349	7.940 3756	2
59	7.861 3841	7.878 4293	7.894 8306	7.910 6352	7.925 8847	7.940 6170	1
60	7.861 6738	7.878 7077	7.895 0988	7.910 8938	7.926 1344	7.940 8584	0
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0	7.940 8419	7.955 0819	7.968 8698	7.982 2334	7.995 1980	8.007 7867	60
1	7.941 0831	7.955 3153	7.969 0960	7.982 4527	7.995 4108	8.007 9934	59
2	7.941 3241	7.955 5486	7.969 3220	7.982 6718	7.995 6235	8.008 2001	58
3	7.941 5651	7.955 7818	7.969 5479	7.982 8909	7.995 8361	8.008 4066	57
4	7.941 8059	7.956 0149	7.969 7736	7.983 1098	7.996 0487	8.008 6131	56
5	7.942 0465	7.956 2478	7.969 9993	7.983 3287	7.996 2611	8.008 8194	55
6	7.942 2871	7.956 4806	7.970 2248	7.983 5474	7.996 4734	8.009 0257	54
7	7.942 5275	7.956 7133	7.970 4503	7.983 7660	7.996 6856	8.009 2318	53
8	7.942 7677	7.956 9458	7.970 6756	7.983 9845	7.996 8977	8.009 4379	52
9	7.943 0079	7.957 1782	7.970 9008	7.984 2029	7.997 1097	8.009 6439	51
10	7.943 2479	7.957 4105	7.971 1258	7.984 4212	7.997 3216	8.009 8497	50
11	7.943 4877	7.957 6427	7.971 3508	7.984 6394	7.997 5334	8.010 0555	49
12	7.943 7275	7.957 8747	7.971 5756	7.984 8574	7.997 7451	8.010 2612	48
13	7.943 9671	7.958 1067	7.971 8004	7.985 0754	7.997 9566	8.010 4668	47
14	7.944 2066	7.958 3385	7.972 0250	7.985 2933	7.998 1681	8.010 6722	46
15	7.944 4459	7.958 5702	7.972 2495	7.985 5110	7.998 3795	8.010 8776	45
16	7.944 6851	7.958 8017	7.972 4738	7.985 7286	7.998 5908	8.011 0829	44
17	7.944 9242	7.959 0331	7.972 6981	7.985 9461	7.998 8020	8.011 2881	43
18	7.945 1631	7.959 2645	7.972 9222	7.986 1636	7.999 0130	8.011 4932	42
19	7.945 4019	7.959 4956	7.973 1463	7.986 3809	7.999 2240	8.011 6982	41
20	7.945 6406	7.959 7267	7.973 3702	7.986 5981	7.999 4349	8.011 9031	40
21	7.945 8792	7.959 9576	7.973 5940	7.986 8151	7.999 6456	8.012 1079	39
22	7.946 1176	7.960 1885	7.973 8177	7.987 0321	7.999 8563	8.012 3126	38
23	7.946 3559	7.960 4192	7.974 0412	7.987 2490	8.000 0669	8.012 5172	37
24	7.946 5940	7.960 6497	7.974 2647	7.987 4658	8.000 2773	8.012 7217	36
25	7.946 8321	7.960 8802	7.974 4880	7.987 6824	8.000 4877	8.012 9261	35
26	7.947 0700	7.961 1105	7.974 7113	7.987 8989	8.000 6979	8.013 1304	34
27	7.947 3077	7.961 3407	7.974 9344	7.988 1154	8.000 9081	8.013 3347	33
28	7.947 5454	7.961 5708	7.975 1574	7.988 3317	8.001 1181	8.013 5388	32
29	7.947 7829	7.961 8008	7.975 3802	7.988 5479	8.001 3281	8.013 7428	31
30	7.948 0203	7.962 0306	7.975 6030	7.988 7641	8.001 5379	8.013 9468	30
31	7.948 2575	7.962 2603	7.975 8257	7.988 9801	8.001 7477	8.014 1506	29
32	7.948 4946	7.962 4899	7.976 0482	7.989 1960	8.001 9573	8.014 3543	28
33	7.948 7316	7.962 7194	7.976 2706	7.989 4117	8.002 1669	8.014 5580	27
34	7.948 9685	7.962 9487	7.976 4929	7.989 6274	8.002 3763	8.014 7615	26
35	7.949 2052	7.963 1780	7.976 7151	7.989 8430	8.002 5856	8.014 9650	25
36	7.949 4418	7.963 4071	7.976 9372	7.990 0585	8.002 7949	8.015 1684	24
37	7.949 6783	7.963 6361	7.977 1592	7.990 2738	8.003 0040	8.015 3716	23
38	7.949 9146	7.963 8649	7.977 3810	7.990 4891	8.003 2131	8.015 5748	22
39	7.950 1508	7.964 0937	7.977 6028	7.990 7043	8.003 4220	8.015 7779	21
40	7.950 3869	7.964 3223	7.977 8244	7.990 9193	8.003 6308	8.015 9808	20
41	7.950 6229	7.964 5508	7.978 0459	7.991 1342	8.003 8396	8.016 1837	19
42	7.950 8587	7.964 7792	7.978 2673	7.991 3491	8.004 0482	8.016 3865	18
43	7.951 0944	7.965 0075	7.978 4886	7.991 5638	8.004 2568	8.016 5892	17
44	7.951 3300	7.965 2356	7.978 7098	7.991 7784	8.004 4652	8.016 7918	16
45	7.951 5654	7.965 4637	7.978 9309	7.991 9929	8.004 6735	8.016 9943	15
46	7.951 8008	7.965 6916	7.979 1518	7.992 2073	8.004 8818	8.017 1967	14
47	7.952 0360	7.965 9194	7.979 3726	7.992 4216	8.005 0899	8.017 3991	13
48	7.952 2710	7.966 1470	7.979 5934	7.992 6358	8.005 2979	8.017 6013	12
49	7.952 5060	7.966 3746	7.979 8140	7.992 8499	8.005 5059	8.017 8034	11
50	7.952 7408	7.966 6020	7.980 0345	7.993 0639	8.005 7137	8.018 0055	10
51	7.952 9755	7.966 8293	7.980 2549	7.993 2778	8.005 9215	8.018 2074	9
52	7.953 2100	7.967 0565	7.980 4752	7.993 4915	8.006 1291	8.018 4093	8
53	7.953 4444	7.967 2836	7.980 6953	7.993 7052	8.006 3366	8.018 6110	7
54	7.953 6787	7.967 5106	7.980 9154	7.993 9188	8.006 5441	8.018 8127	6
55	7.953 9129	7.967 7374	7.981 1353	7.994 1322	8.006 7514	8.019 0142	5
56	7.954 1470	7.967 9641	7.981 3552	7.994 3456	8.006 9587	8.019 2157	4
57	7.954 3809	7.968 1907	7.981 5749	7.994 5588	8.007 1658	8.019 4171	3
58	7.954 6147	7.968 4172	7.981 7945	7.994 7720	8.007 3729	8.019 6184	2
59	7.954 8484	7.968 6436	7.982 0140	7.994 9850	8.007 5798	8.019 8196	1
60	7.955 0819	7.968 8698	7.982 2334	7.995 1980	8.007 7867	8.020 0207	0
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0	7·940 8584	7·955 0996	7·968 8886	7·982 2534	7·995 2192	8.007 8092	60
1	7·941 0996	7·955 3330	7·969 1148	7·982 4727	7·995 4320	8.008 0159	59
2	7·941 3407	7·955 5663	7·969 3408	7·982 6919	7·995 6448	8.008 2226	58
3	7·941 5817	7·955 7995	7·969 5667	7·982 9110	7·995 8574	8.008 4292	57
4	7·941 8225	7·956 0326	7·969 7925	7·983 1299	7·996 0700	8.008 6357	56
5	7·942 0632	7·956 2655	7·970 0182	7·983 3488	7·996 2824	8.008 8420	55
6	7·942 3037	7·956 4984	7·970 2438	7·983 5675	7·996 4947	8.009 0483	54
7	7·942 5441	7·956 7310	7·970 4692	7·983 7862	7·996 7070	8.009 2545	53
8	7·942 7844	7·956 9636	7·970 6945	7·984 0047	7·996 9191	8.009 4606	52
9	7·943 0246	7·957 1961	7·970 9198	7·984 2231	7·997 1311	8.009 6666	51
10	7·943 2646	7·957 4284	7·971 1449	7·984 4414	7·997 3430	8.009 8725	50
11	7·943 5045	7·957 6606	7·971 3698	7·984 6596	7·997 5548	8.010 0783	49
12	7·943 7442	7·957 8926	7·971 5947	7·984 8777	7·997 7666	8.010 2840	48
13	7·943 9839	7·958 1246	7·971 8194	7·985 0957	7·997 9782	8.010 4896	47
14	7·944 2233	7·958 3564	7·972 0441	7·985 3136	7·998 1897	8.010 6951	46
15	7·944 4627	7·958 5881	7·972 2686	7·985 5313	7·998 4011	8.010 9005	45
16	7·944 7019	7·958 8197	7·972 4930	7·985 7490	7·998 6124	8.011 1058	44
17	7·944 9410	7·959 0511	7·972 7173	7·985 9665	7·998 8236	8.011 3110	43
18	7·945 1800	7·959 2825	7·972 9414	7·986 1839	7·999 0346	8.011 5161	42
19	7·945 4188	7·959 5137	7·973 1655	7·986 4013	7·999 2456	8.011 7211	41
20	7·945 6575	7·959 7447	7·973 3894	7·986 6185	7·999 4565	8.011 9260	40
21	7·945 8961	7·959 9757	7·973 6132	7·986 8356	7·999 6673	8.012 1308	39
22	7·946 1345	7·960 2065	7·973 8369	7·987 0526	7·999 8780	8.012 3356	38
23	7·946 3728	7·960 4373	7·974 0605	7·987 2695	8.000 0886	8.012 5402	37
24	7·946 6110	7·960 6678	7·974 2840	7·987 4862	8.000 2991	8.012 7447	36
25	7·946 8491	7·960 8983	7·974 5073	7·987 7029	8.000 5094	8.012 9492	35
26	7·947 0870	7·961 1287	7·974 7306	7·987 9195	8.000 7197	8.013 1535	34
27	7·947 3248	7·961 3589	7·974 9537	7·988 1359	8.000 9299	8.013 3578	33
28	7·947 5624	7·961 5890	7·975 1767	7·988 3523	8.001 1400	8.013 5619	32
29	7·947 8000	7·961 8190	7·975 3996	7·988 5685	8.001 3499	8.013 7660	31
30	7·948 0374	7·962 0488	7·975 6224	7·988 7847	8.001 5598	8.013 9699	30
31	7·948 2746	7·962 2786	7·975 8451	7·989 0007	8.001 7696	8.014 1738	29
32	7·948 5118	7·962 5082	7·976 0676	7·989 2166	8.001 9792	8.014 3775	28
33	7·948 7488	7·962 7377	7·976 2901	7·989 4324	8.002 1888	8.014 5812	27
34	7·948 9856	7·962 9670	7·976 5124	7·989 6481	8.002 3983	8.014 7848	26
35	7·949 2224	7·963 1963	7·976 7346	7·989 8637	8.002 6076	8.014 9883	25
36	7·949 4590	7·963 4254	7·976 9567	7·990 0792	8.002 8169	8.015 1916	24
37	7·949 6955	7·963 6544	7·977 1787	7·990 2946	8.003 0260	8.015 3949	23
38	7·949 9319	7·963 8833	7·977 4006	7·990 5099	8.003 2351	8.015 5981	22
39	7·950 1681	7·964 1121	7·977 6224	7·990 7251	8.003 4441	8.015 8012	21
40	7·950 4042	7·964 3408	7·977 8440	7·990 9401	8.003 6529	8.016 0042	20
41	7·950 6402	7·964 5693	7·978 0655	7·991 1551	8.003 8617	8.016 2071	19
42	7·950 8760	7·964 7977	7·978 2870	7·991 3699	8.004 0703	8.016 4099	18
43	7·951 1118	7·965 0260	7·978 5083	7·991 5847	8.004 2789	8.016 6127	17
44	7·951 3474	7·965 2541	7·978 7295	7·991 7993	8.004 4874	8.016 8153	16
45	7·951 5828	7·965 4822	7·978 9506	7·992 0138	8.004 6957	8.017 0178	15
46	7·951 8182	7·965 7101	7·979 1715	7·992 2283	8.004 9040	8.017 2203	14
47	7·952 0534	7·965 9379	7·979 3924	7·992 4426	8.005 1121	8.017 4226	13
48	7·952 2885	7·966 1656	7·979 6131	7·992 6568	8.005 3202	8.017 6248	12
49	7·952 5234	7·966 3932	7·979 8338	7·992 8709	8.005 5282	8.017 8270	11
50	7·952 7582	7·966 6206	7·980 0543	7·993 0849	8.005 7360	8.018 0291	10
51	7·952 9929	7·966 8480	7·980 2747	7·993 2988	8.005 9438	8.018 2310	9
52	7·953 2275	7·967 0752	7·980 4950	7·993 5126	8.006 1514	8.018 4329	8
53	7·953 4620	7·967 3023	7·980 7152	7·993 7263	8.006 3590	8.018 6347	7
54	7·953 6963	7·967 5293	7·980 9353	7·993 9399	8.006 5665	8.018 8364	6
55	7·953 9305	7·967 7561	7·981 1552	7·994 1534	8.006 7738	8.019 0379	5
56	7·954 1646	7·967 9829	7·981 3751	7·994 3667	8.006 9811	8.019 2394	4
57	7·954 3985	7·968 2095	7·981 5948	7·994 5800	8.007 1883	8.019 4408	3
58	7·954 6323	7·968 4360	7·981 8145	7·994 7932	8.007 3953	8.019 6422	2
59	7·954 8660	7·968 6624	7·982 0340	7·995 0062	8.007 6023	8.019 8434	1
60	7·955 0996	7·968 8886	7·982 2534	7·995 2192	8.007 8092	8.020 0445	0
″	29′	28′	27′	26′	25′	24′	″

cotg 89°

″	36′	37′	38′	39′	40′	41′	″
0	8.020 0207	8.031 9195	8.043 5009	8.054 7814	8.065 7763	8.076 4997	60
1	8.020 2217	8.032 1150	8.043 6913	8.054 9670	8.065 9572	8.076 6762	59
2	8.020 4226	8.032 3105	8.043 8816	8.055 1524	8.066 1381	8.076 8526	58
3	8.020 6234	8.032 5059	8.044 0719	8.055 3378	8.066 3188	8.077 0290	57
4	8.020 8242	8.032 7012	8.044 2621	8.055 5231	8.066 4995	8.077 2052	56
5	8.021 0248	8.032 8965	8.044 4522	8.055 7084	8.066 6801	8.077 3815	55
6	8.021 2253	8.033 0916	8.044 6422	8.055 8935	8.066 8606	8.077 5576	54
7	8.021 4258	8.033 2866	8.044 8321	8.056 0786	8.067 0411	8.077 7337	53
8	8.021 6261	8.033 4816	8.045 0220	8.056 2636	8.067 2215	8.077 9097	52
9	8.021 8264	8.033 6765	8.045 2117	8.056 4485	8.067 4018	8.078 0856	51
10	8.022 0266	8.033 8713	8.045 4014	8.056 6333	8.067 5820	8.078 2614	50
11	8.022 2267	8.034 0660	8.045 5910	8.056 8181	8.067 7622	8.078 4372	49
12	8.022 4267	8.034 2606	8.045 7805	8.057 0028	8.067 9423	8.078 6129	48
13	8.022 6266	8.034 4551	8.045 9700	8.057 1874	8.068 1223	8.078 7886	47
14	8.022 8264	8.034 6495	8.046 1593	8.057 3719	8.068 3022	8.078 9641	46
15	8.023 0261	8.034 8439	8.046 3486	8.057 5563	8.068 4821	8.079 1396	45
16	8.023 2257	8.035 0382	8.046 5378	8.057 7407	8.068 6619	8.079 3151	44
17	8.023 4252	8.035 2323	8.046 7269	8.057 9250	8.068 8416	8.079 4904	43
18	8.023 6247	8.035 4264	8.046 9159	8.058 1092	8.069 0212	8.079 6657	42
19	8.023 8240	8.035 6204	8.047 1048	8.058 2933	8.069 2008	8.079 8409	41
20	8.024 0233	8.035 8143	8.047 2937	8.058 4774	8.069 3803	8.080 0161	40
21	8.024 2224	8.036 0082	8.047 4825	8.058 6614	8.069 5597	8.080 1912	39
22	8.024 4215	8.036 2019	8.047 6712	8.058 8453	8.069 7390	8.080 3662	38
23	8.024 6205	8.036 3956	8.047 8598	8.059 0291	8.069 9183	8.080 5411	37
24	8.024 8194	8.036 5892	8.048 0483	8.059 2128	8.070 0975	8.080 7160	36
25	8.025 0182	8.036 7826	8.048 2368	8.059 3965	8.070 2766	8.080 8908	35
26	8.025 2169	8.036 9760	8.048 4251	8.059 5801	8.070 4557	8.081 0655	34
27	8.025 4155	8.037 1693	8.048 6134	8.059 7636	8.070 6346	8.081 2401	33
28	8.025 6140	8.037 3626	8.048 8016	8.059 9470	8.070 8135	8.081 4147	32
29	8.025 8125	8.037 5557	8.048 9897	8.060 1304	8.070 9923	8.081 5892	31
30	8.026 0108	8.037 7488	8.049 1778	8.060 3137	8.071 1711	8.081 7637	30
31	8.026 2091	8.037 9417	8.049 3657	8.060 4969	8.071 3498	8.081 9380	29
32	8.026 4072	8.038 1346	8.049 5536	8.060 6800	8.071 5284	8.082 1123	28
33	8.026 6053	8.038 3274	8.049 7414	8.060 8630	8.071 7069	8.082 2866	27
34	8.026 8033	8.038 5201	8.049 9291	8.061 0460	8.071 8854	8.082 4607	26
35	8.027 0012	8.038 7128	8.050 1167	8.061 2289	8.072 0637	8.082 6348	25
36	8.027 1990	8.038 9053	8.050 3043	8.061 4117	8.072 2421	8.082 8088	24
37	8.027 3967	8.039 0978	8.050 4918	8.061 5944	8.072 4203	8.082 9828	23
38	8.027 5943	8.039 2901	8.050 6792	8.061 7771	8.072 5985	8.083 1567	22
39	8.027 7919	8.039 4824	8.050 8665	8.061 9597	8.072 7765	8.083 3305	21
40	8.027 9893	8.039 6746	8.051 0537	8.062 1422	8.072 9546	8.083 5042	20
41	8.028 1867	8.039 8667	8.051 2408	8.062 3246	8.073 1325	8.083 6779	19
42	8.028 3839	8.040 0588	8.051 4279	8.062 5070	8.073 3104	8.083 8515	18
43	8.028 5811	8.040 2507	8.051 6149	8.062 6892	8.073 4882	8.084 0251	17
44	8.028 7782	8.040 4426	8.051 8018	8.062 8714	8.073 6659	8.084 1985	16
45	8.028 9752	8.040 6343	8.051 9886	8.063 0536	8.073 8436	8.084 3719	15
46	8.029 1721	8.040 8260	8.052 1754	8.063 2356	8.074 0211	8.084 5452	14
47	8.029 3689	8.041 0176	8.052 3620	8.063 4176	8.074 1986	8.084 7185	13
48	8.029 5656	8.041 2092	8.052 5486	8.063 5995	8.074 3761	8.084 8917	12
49	8.029 7623	8.041 4006	8.052 7351	8.063 7813	8.074 5534	8.085 0648	11
50	8.029 9588	8.041 5920	8.052 9216	8.063 9630	8.074 7307	8.085 2379	10
51	8.030 1553	8.041 7832	8.053 1079	8.064 1447	8.074 9080	8.085 4109	9
52	8.030 3517	8.041 9744	8.053 2942	8.064 3263	8.075 0851	8.085 5838	8
53	8.030 5479	8.042 1655	8.053 4803	8.064 5078	8.075 2622	8.085 7566	7
54	8.030 7441	8.042 3565	8.053 6665	8.064 6893	8.075 4392	8.085 9294	6
55	8.030 9403	8.042 5475	8.053 8525	8.064 8706	8.075 6161	8.086 1021	5
56	8.031 1363	8.042 7383	8.054 0384	8.065 0519	8.075 7930	8.086 2747	4
57	8.031 3322	8.042 9291	8.054 2243	8.065 2331	8.075 9698	8.086 4473	3
58	8.031 5280	8.043 1198	8.054 4101	8.065 4143	8.076 1465	8.086 6198	2
59	8.031 7238	8.043 3104	8.054 5958	8.065 5953	8.076 3231	8.086 7922	1
60	8.031 9195	8.043 5009	8.054 7814	8.065 7763	8.076 4997	8.086 9646	0
″	23′	22′	21′	20′	19′	18′	″

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″	36′	37′	38′	39′	40′	41′	″
0	8.020 0445	8.031 9446	8.043 5274	8.054 8094	8.065 8057	8.076 5306	60
1	8.020 2455	8.032 1402	8.043 7179	8.054 9949	8.065 9866	8.076 7071	59
2	8.020 4465	8.032 3357	8.043 9082	8.055 1804	8.066 1675	8.076 8835	58
3	8.020 6473	8.032 5311	8.044 0985	8.055 3658	8.066 3483	8.077 0599	57
4	8.020 8481	8.032 7265	8.044 2887	8.055 5512	8.066 5290	8.077 2362	56
5	8.021 0487	8.032 9217	8.044 4788	8.055 7364	8.066 7096	8.077 4125	55
6	8.021 2493	8.033 1169	8.044 6689	8.055 9216	8.066 8902	8.077 5886	54
7	8.021 4498	8.033 3120	8.044 8588	8.056 1067	8.067 0707	8.077 7647	53
8	8.021 6501	8.033 5069	8.045 0487	8.056 2917	8.067 2511	8.077 9407	52
9	8.021 8504	8.033 7018	8.045 2385	8.056 4767	8.067 4314	8.078 1167	51
10	8.022 0506	8.033 8967	8.045 4282	8.056 6615	8.067 6117	8.078 2926	50
11	8.022 2507	8.034 0914	8.045 6178	8.056 8463	8.067 7919	8.078 4684	49
12	8.022 4507	8.034 2860	8.045 8074	8.057 0310	8.067 9720	8.078 6441	48
13	8.022 6507	8.034 4806	8.045 9968	8.057 2156	8.068 1520	8.078 8198	47
14	8.022 8505	8.034 6750	8.046 1862	8.057 4002	8.068 3320	8.078 9954	46
15	8.023 0502	8.034 8694	8.046 3755	8.057 5846	8.068 5118	8.079 1709	45
16	8.023 2499	8.035 0637	8.046 5647	8.057 7690	8.068 6917	8.079 3464	44
17	8.023 4494	8.035 2579	8.046 7538	8.057 9534	8.068 8714	8.079 5218	43
18	8.023 6489	8.035 4520	8.046 9429	8.058 1376	8.069 0511	8.079 6971	42
19	8.023 8483	8.035 6460	8.047 1318	8.058 3217	8.069 2306	8.079 8723	41
20	8.024 0475	8.035 8400	8.047 3207	8.058 5058	8.069 4102	8.080 0475	40
21	8.024 2467	8.036 0338	8.047 5095	8.058 6898	8.069 5896	8.080 2226	39
22	8.024 4458	8.036 2276	8.047 6982	8.058 8737	8.069 7690	8.080 3976	38
23	8.024 6448	8.036 4213	8.047 8869	8.059 0576	8.069 9483	8.080 5726	37
24	8.024 8437	8.036 6149	8.048 0754	8.059 2414	8.070 1275	8.080 7475	36
25	8.025 0426	8.036 8084	8.048 2639	8.059 4250	8.070 3066	8.080 9223	35
26	8.025 2413	8.037 0018	8.048 4523	8.059 6087	8.070 4857	8.081 0970	34
27	8.025 4399	8.037 1951	8.048 6406	8.059 7922	8.070 6647	8.081 2717	33
28	8.025 6385	8.037 3884	8.048 8288	8.059 9756	8.070 8436	8.081 4463	32
29	8.025 8369	8.037 5815	8.049 0169	8.060 1590	8.071 0225	8.081 6208	31
30	8.026 0353	8.037 7746	8.049 2050	8.060 3423	8.071 2012	8.081 7953	30
31	8.026 2336	8.037 9676	8.049 3930	8.060 5255	8.071 3799	8.081 9697	29
32	8.026 4318	8.038 1605	8.049 5809	8.060 7087	8.071 5586	8.082 1440	28
33	8.026 6299	8.038 3533	8.049 7687	8.060 8918	8.071 7371	8.082 3183	27
34	8.026 8279	8.038 5461	8.049 9564	8.061 0748	8.071 9156	8.082 4925	26
35	8.027 0258	8.038 7387	8.050 1441	8.061 2577	8.072 0940	8.082 6666	25
36	8.027 2236	8.038 9313	8.050 3317	8.061 4405	8.072 2723	8.082 8406	24
37	8.027 4213	8.039 1238	8.050 5192	8.061 6233	8.072 4506	8.083 0146	23
38	8.027 6190	8.039 3162	8.050 7066	8.061 8060	8.072 6288	8.083 1885	22
39	8.027 8166	8.039 5085	8.050 8939	8.061 9886	8.072 8069	8.083 3624	21
40	8.028 0140	8.039 7007	8.051 0812	8.062 1711	8.072 9850	8.083 5361	20
41	8.028 2114	8.039 8928	8.051 2683	8.062 3536	8.073 1629	8.083 7098	19
42	8.028 4087	8.040 0849	8.051 4554	8.062 5359	8.073 3408	8.083 8835	18
43	8.028 6059	8.040 2768	8.051 6424	8.062 7182	8.073 5186	8.084 0570	17
44	8.028 8030	8.040 4687	8.051 8294	8.062 9005	8.073 6964	8.084 2305	16
45	8.029 0000	8.040 6605	8.052 0162	8.063 0826	8.073 8741	8.084 4039	15
46	8.029 1969	8.040 8522	8.052 2030	8.063 2647	8.074 0517	8.084 5773	14
47	8.029 3938	8.041 0439	8.052 3897	8.063 4467	8.074 2292	8.084 7506	13
48	8.029 5905	8.041 2354	8.052 5763	8.063 6286	8.074 4067	8.084 9238	12
49	8.029 7872	8.041 4269	8.052 7628	8.063 8104	8.074 5841	8.085 0969	11
50	8.029 9838	8.041 6183	8.052 9493	8.063 9922	8.074 7614	8.085 2700	10
51	8.030 1802	8.041 8096	8.053 1356	8.064 1739	8.074 9386	8.085 4430	9
52	8.030 3766	8.042 0008	8.053 3219	8.064 3555	8.075 1158	8.085 6160	8
53	8.030 5729	8.042 1919	8.053 5081	8.064 5371	8.075 2929	8.085 7888	7
54	8.030 7692	8.042 3829	8.053 6943	8.064 7185	8.075 4699	8.085 9616	6
55	8.030 9653	8.042 5739	8.053 8803	8.064 8999	8.075 6469	8.086 1344	5
56	8.031 1613	8.042 7648	8.054 0663	8.065 0812	8.075 8238	8.086 3070	4
57	8.031 3573	8.042 9555	8.054 2522	8.065 2625	8.076 0006	8.086 4796	3
58	8.031 5531	8.043 1462	8.054 4380	8.065 4436	8.076 1773	8.086 6522	2
59	8.031 7489	8.043 3369	8.054 6237	8.065 6247	8.076 3540	8.086 8246	1
60	8.031 9446	8.043 5274	8.054 8094	8.065 8057	8.076 5306	8.086 9970	0
″	23′	22′	21′	20′	19′	18′	″

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″	42′	43′	44′	45′	46′	47′	″
0	8.086 9646	8.097 1832	8.107 1669	8.116 9262	8.126 4710	8.135 8104	60
1	8.087 1369	8.097 3515	8.107 3314	8.117 0870	8.126 6283	8.135 9644	59
2	8.087 3091	8.097 5198	8.107 4958	8.117 2478	8.126 7856	8.136 1183	58
3	8.087 4813	8.097 6879	8.107 6601	8.117 4085	8.126 9428	8.136 2722	57
4	8.087 6534	8.097 8560	8.107 8244	8.117 5691	8.127 0999	8.136 4260	56
5	8.087 8254	8.098 0240	8.107 9886	8.117 7297	8.127 2570	8.136 5797	55
6	8.087 9974	8.098 1920	8.108 1528	8.117 8902	8.127 4140	8.136 7334	54
7	8.088 1692	8.098 3599	8.108 3169	8.118 0507	8.127 5710	8.136 8871	53
8	8.088 3411	8.098 5277	8.108 4809	8.118 2111	8.127 7279	8.137 0407	52
9	8.088 5128	8.098 6955	8.108 6449	8.118 3714	8.127 8848	8.137 1942	51
10	8.088 6845	8.098 8632	8.108 8088	8.118 5317	8.128 0416	8.137 3477	50
11	8.088 8561	8.099 0309	8.108 9726	8.118 6919	8.128 1983	8.137 5011	49
12	8.089 0277	8.099 1984	8.109 1364	8.118 8520	8.128 3550	8.137 6545	48
13	8.089 1991	8.099 3659	8.109 3001	8.119 0121	8.128 5117	8.137 8078	47
14	8.089 3706	8.099 5334	8.109 4638	8.119 1722	8.128 6682	8.137 9610	46
15	8.089 5419	8.099 7008	8.109 6274	8.119 3322	8.128 8248	8.138 1143	45
16	8.089 7132	8.099 8681	8.109 7909	8.119 4921	8.128 9812	8.138 2674	44
17	8.089 8844	8.100 0353	8.109 9544	8.119 6519	8.129 1376	8.138 4205	43
18	8.090 0555	8.100 2025	8.110 1178	8.119 8118	8.129 2940	8.138 5736	42
19	8.090 2266	8.100 3697	8.110 2812	8.119 9715	8.129 4503	8.138 7265	41
20	8.090 3976	8.100 5367	8.110 4445	8.120 1312	8.129 6065	8.138 8795	40
21	8.090 5685	8.100 7037	8.110 6077	8.120 2908	8.129 7627	8.139 0324	39
22	8.090 7394	8.100 8706	8.110 7709	8.120 4504	8.129 9188	8.139 1852	38
23	8.090 9102	8.101 0375	8.110 9340	8.120 6099	8.130 0749	8.139 3380	37
24	8.091 0810	8.101 2043	8.111 0970	8.120 7693	8.130 2309	8.139 4907	36
25	8.091 2516	8.101 3710	8.111 2600	8.120 9287	8.130 3869	8.139 6434	35
26	8.091 4222	8.101 5377	8.111 4229	8.121 0881	8.130 5428	8.139 7960	34
27	8.091 5928	8.101 7043	8.111 5858	8.121 2474	8.130 6986	8.139 9485	33
28	8.091 7632	8.101 8709	8.111 7486	8.121 4066	8.130 8544	8.140 1011	32
29	8.091 9336	8.102 0374	8.111 9113	8.121 5657	8.131 0101	8.140 2535	31
30	8.092 1040	8.102 2038	8.112 0740	8.121 7248	8.131 1658	8.140 4059	30
31	8.092 2743	8.102 3701	8.112 2366	8.121 8839	8.131 3215	8.140 5583	29
32	8.092 4445	8.102 5364	8.112 3992	8.122 0429	8.131 4770	8.140 7105	28
33	8.092 6146	8.102 7027	8.112 5617	8.122 2018	8.131 6325	8.140 8628	27
34	8.092 7847	8.102 8688	8.112 7241	8.122 3607	8.131 7880	8.141 0150	26
35	8.092 9547	8.103 0349	8.112 8865	8.122 5195	8.131 9434	8.141 1671	25
36	8.093 1246	8.103 2010	8.113 0488	8.122 6782	8.132 0987	8.141 3192	24
37	8.093 2945	8.103 3669	8.113 2110	8.122 8369	8.132 2540	8.141 4712	23
38	8.093 4643	8.103 5328	8.113 3732	8.122 9956	8.132 4093	8.141 6232	22
39	8.093 6340	8.103 6987	8.113 5354	8.123 1541	8.132 5644	8.141 7751	21
40	8.093 8037	8.103 8645	8.113 6974	8.123 3127	8.132 7196	8.141 9270	20
41	8.093 9733	8.104 0302	8.113 8595	8.123 4711	8.132 8746	8.142 0788	19
42	8.094 1428	8.104 1959	8.114 0214	8.123 6295	8.133 0296	8.142 2306	18
43	8.094 3123	8.104 3615	8.114 1833	8.123 7879	8.133 1846	8.142 3823	17
44	8.094 4817	8.104 5270	8.114 3451	8.123 9462	8.133 3395	8.142 5339	16
45	8.094 6510	8.104 6925	8.114 5069	8.124 1044	8.133 4943	8.142 6855	15
46	8.094 8203	8.104 8579	8.114 6686	8.124 2626	8.133 6491	8.142 8371	14
47	8.094 9895	8.105 0232	8.114 8302	8.124 4207	8.133 8039	8.142 9886	13
48	8.095 1587	8.105 1885	8.114 9918	8.124 5787	8.133 9586	8.143 1400	12
49	8.095 3277	8.105 3537	8.115 1534	8.124 7367	8.134 1132	8.143 2914	11
50	8.095 4968	8.105 5188	8.115 3148	8.124 8947	8.134 2678	8.143 4427	10
51	8.095 6657	8.105 6839	8.115 4762	8.125 0526	8.134 4223	8.143 5940	9
52	8.095 8346	8.105 8490	8.115 6376	8.125 2104	8.134 5767	8.143 7453	8
53	8.096 0034	8.106 0139	8.115 7989	8.125 3682	8.134 7311	8.143 8964	7
54	8.096 1721	8.106 1788	8.115 9601	8.125 5259	8.134 8855	8.144 0476	6
55	8.096 3408	8.106 3437	8.116 1213	8.125 6836	8.135 0398	8.144 1987	5
56	8.096 5094	8.106 5085	8.116 2824	8.125 8412	8.135 1940	8.144 3497	4
57	8.096 6780	8.106 6732	8.116 4434	8.125 9987	8.135 3482	8.144 5006	3
58	8.096 8465	8.106 8378	8.116 6044	8.126 1562	8.135 5023	8.144 6516	2
59	8.097 0149	8.107 0024	8.116 7654	8.126 3136	8.135 6564	8.144 8024	1
60	8.097 1832	8.107 1669	8.116 9262	8.126 4710	8.135 8104	8.144 9532	0
″	17′	16′	15′	14′	13′	12′	″

cos 89°

″	42′	43′	44′	45′	46′	47′	″
0	8.086 9970	8.097 2172	8.107 2025	8.116 9634	8.126 5099	8.135 8510	60
1	8.087 1693	8.097 3855	8.107 3670	8.117 1243	8.126 6672	8.136 0050	59
2	8.087 3416	8.097 5538	8.107 5314	8.117 2851	8.126 8245	8.136 1590	58
3	8.087 5138	8.097 7220	8.107 6958	8.117 4458	8.126 9817	8.136 3129	57
4	8.087 6859	8.097 8901	8.107 8601	8.117 6064	8.127 1389	8.136 4667	56
5	8.087 8579	8.098 0582	8.108 0243	8.117 7670	8.127 2960	8.136 6205	55
6	8.088 0299	8.098 2261	8.108 1885	8.117 9276	8.127 4531	8.136 7742	54
7	8.088 2018	8.098 3941	8.108 3526	8.118 0881	8.127 6101	8.136 9279	53
8	8.088 3737	8.098 5619	8.108 5167	8.118 2485	8.127 7670	8.137 0815	52
9	8.088 5455	8.098 7297	8.108 6807	8.118 4088	8.127 9239	8.137 2350	51
10	8.088 7172	8.098 8975	8.108 8446	8.118 5691	8.128 0807	8.137 3886	50
11	8.088 8888	8.099 0651	8.109 0085	8.118 7294	8.128 2375	8.137 5420	49
12	8.089 0604	8.099 2327	8.109 1723	8.118 8896	8.128 3942	8.137 6954	48
13	8.089 2319	8.099 4003	8.109 3361	8.119 0497	8.128 5509	8.137 8488	47
14	8.089 4033	8.099 5677	8.109 4998	8.119 2098	8.128 7075	8.138 0020	46
15	8.089 5747	8.099 7351	8.109 6634	8.119 3698	8.128 8641	8.138 1553	45
16	8.089 7460	8.099 9025	8.109 8269	8.119 5297	8.129 0206	8.138 3085	44
17	8.089 9172	8.100 0698	8.109 9904	8.119 6896	8.129 1770	8.138 4616	43
18	8.090 0884	8.100 2370	8.110 1539	8.119 8495	8.129 3334	8.138 6147	42
19	8.090 2595	8.100 4041	8.110 3173	8.120 0092	8.129 4897	8.138 7677	41
20	8.090 4305	8.100 5712	8.110 4806	8.120 1689	8.129 6460	8.138 9207	40
21	8.090 6015	8.100 7382	8.110 6438	8.120 3286	8.129 8022	8.139 0736	39
22	8.090 7724	8.100 9052	8.110 8070	8.120 4882	8.129 9583	8.139 2264	38
23	8.090 9432	8.101 0721	8.110 9702	8.120 6477	8.130 1144	8.139 3792	37
24	8.091 1140	8.101 2389	8.111 1332	8.120 8072	8.130 2705	8.139 5320	36
25	8.091 2847	8.101 4057	8.111 2962	8.120 9666	8.130 4265	8.139 6847	35
26	8.091 4553	8.101 5724	8.111 4592	8.121 1260	8.130 5824	8.139 8373	34
27	8.091 6259	8.101 7390	8.111 6221	8.121 2853	8.130 7383	8.139 9899	33
28	8.091 7964	8.101 9056	8.111 7849	8.121 4446	8.130 8941	8.140 1425	32
29	8.091 9668	8.102 0721	8.111 9477	8.121 6037	8.131 0498	8.140 2949	31
30	8.092 1372	8.102 2386	8.112 1104	8.121 7629	8.131 2056	8.140 4474	30
31	8.092 3075	8.102 4049	8.112 2730	8.121 9219	8.131 3612	8.140 5997	29
32	8.092 4777	8.102 5713	8.112 4356	8.122 0810	8.131 5168	8.140 7521	28
33	8.092 6479	8.102 7375	8.112 5981	8.122 2399	8.131 6723	8.140 9043	27
34	8.092 8180	8.102 9037	8.112 7606	8.122 3988	8.131 8278	8.141 0566	26
35	8.092 9880	8.103 0698	8.112 9230	8.122 5577	8.131 9833	8.141 2087	25
36	8.093 1579	8.103 2359	8.113 0853	8.122 7164	8.132 1386	8.141 3608	24
37	8.093 3278	8.103 4019	8.113 2476	8.122 8752	8.132 2940	8.141 5129	23
38	8.093 4977	8.103 5678	8.113 4098	8.123 0338	8.132 4492	8.141 6649	22
39	8.093 6674	8.103 7337	8.113 5720	8.123 1924	8.132 6044	8.141 8168	21
40	8.093 8371	8.103 8995	8.113 7341	8.123 3510	8.132 7596	8.141 9687	20
41	8.094 0068	8.104 0653	8.113 8961	8.123 5095	8.132 9147	8.142 1206	19
42	8.094 1763	8.104 2309	8.114 0581	8.123 6679	8.133 0697	8.142 2724	18
43	8.094 3458	8.104 3966	8.114 2200	8.123 8263	8.133 2247	8.142 4241	17
44	8.094 5153	8.104 5621	8.114 3819	8.123 9846	8.133 3796	8.142 5758	16
45	8.094 6846	8.104 7276	8.114 5437	8.124 1429	8.133 5345	8.142 7274	15
46	8.094 8539	8.104 8931	8.114 7054	8.124 3011	8.133 6893	8.142 8790	14
47	8.095 0232	8.105 0584	8.114 8671	8.124 4592	8.133 8441	8.143 0305	13
48	8.095 1923	8.105 2237	8.115 0287	8.124 6173	8.133 9988	8.143 1820	12
49	8.095 3614	8.105 3890	8.115 1903	8.124 7753	8.134 1535	8.143 3334	11
50	8.095 5305	8.105 5542	8.115 3518	8.124 9333	8.134 3081	8.143 4848	10
51	8.095 6994	8.105 7193	8.115 5132	8.125 0912	8.134 4626	8.143 6361	9
52	8.095 8683	8.105 8843	8.115 6746	8.125 2491	8.134 6171	8.143 7874	8
53	8.096 0372	8.106 0493	8.115 8359	8.125 4069	8.134 7715	8.143 9386	7
54	8.096 2060	8.106 2142	8.115 9972	8.125 5646	8.134 9259	8.144 0897	6
55	8.096 3747	8.106 3791	8.116 1584	8.125 7223	8.135 0802	8.144 2408	5
56	8.096 5433	8.106 5439	8.116 3195	8.125 8799	8.135 2345	8.144 3919	4
57	8.096 7119	8.106 7087	8.116 4806	8.126 0375	8.135 3887	8.144 5429	3
58	8.096 8804	8.106 8733	8.116 6416	8.126 1950	8.135 5429	8.144 6938	2
59	8.097 0488	8.107 0380	8.116 8025	8.126 3525	8.135 6970	8.144 8447	1
60	8.097 2172	8.107 2025	8.116 9634	8.126 5099	8.135 8510	8.144 9956	0
″	17′	16′	15′	14′	13′	12′	″

″	48′	49′	50′	51′	52′	53′	″
0	8.144 9532	8.153 9075	8.162 6808	8.171 2804	8.179 7129	8.187 9848	60
1	8.145 1040	8.154 0552	8.162 8255	8.171 4223	8.179 8521	8.188 1213	59
2	8.145 2547	8.154 2028	8.162 9702	8.171 5641	8.179 9912	8.188 2578	58
3	8.145 4054	8.154 3504	8.163 1149	8.171 7059	8.180 1303	8.188 3943	57
4	8.145 5560	8.154 4979	8.163 2594	8.171 8477	8.180 2693	8.188 5307	56
5	8.145 7065	8.154 6454	8.163 4040	8.171 9894	8.180 4083	8.188 6670	55
6	8.145 8570	8.154 7928	8.163 5485	8.172 1310	8.180 5472	8.188 8034	54
7	8.146 0075	8.154 9402	8.163 6929	8.172 2726	8.180 6861	8.188 9397	53
8	8.146 1579	8.155 0876	8.163 8373	8.172 4142	8.180 8250	8.189 0759	52
9	8.146 3082	8.155 2348	8.163 9817	8.172 5557	8.180 9638	8.189 2121	51
10	8.146 4585	8.155 3821	8.164 1259	8.172 6972	8.181 1025	8.189 3482	50
11	8.146 6087	8.155 5293	8.164 2702	8.172 8386	8.181 2413	8.189 4843	49
12	8.146 7589	8.155 6764	8.164 4144	8.172 9800	8.181 3799	8.189 6204	48
13	8.146 9091	8.155 8235	8.164 5586	8.173 1214	8.181 5186	8.189 7564	47
14	8.147 0591	8.155 9705	8.164 7027	8.173 2627	8.181 6571	8.189 8924	46
15	8.147 2092	8.156 1175	8.164 8467	8.173 4039	8.181 7957	8.190 0284	45
16	8.147 3592	8.156 2644	8.164 9907	8.173 5451	8.181 9342	8.190 1643	44
17	8.147 5091	8.156 4113	8.165 1347	8.173 6863	8.182 0726	8.190 3001	43
18	8.147 6590	8.156 5582	8.165 2786	8.173 8274	8.182 2111	8.190 4359	42
19	8.147 8088	8.156 7049	8.165 4225	8.173 9684	8.182 3494	8.190 5717	41
20	8.147 9586	8.156 8517	8.165 5663	8.174 1094	8.182 4877	8.190 7074	40
21	8.148 1083	8.156 9984	8.165 7101	8.174 2504	8.182 6260	8.190 8431	39
22	8.148 2579	8.157 1450	8.165 8538	8.174 3913	8.182 7643	8.190 9788	38
23	8.148 4076	8.157 2916	8.165 9975	8.174 5322	8.182 9024	8.191 1144	37
24	8.148 5571	8.157 4381	8.166 1411	8.174 6731	8.183 0406	8.191 2499	36
25	8.148 7066	8.157 5846	8.166 2847	8.174 8138	8.183 1787	8.191 3854	35
26	8.148 8561	8.157 7310	8.166 4282	8.174 9546	8.183 3167	8.191 5209	34
27	8.149 0055	8.157 8774	8.166 5717	8.175 0953	8.183 4548	8.191 6563	33
28	8.149 1549	8.158 0238	8.166 7151	8.175 2359	8.183 5927	8.191 7917	32
29	8.149 3042	8.158 1701	8.166 8585	8.175 3765	8.183 7307	8.191 9271	31
30	8.149 4534	8.158 3163	8.167 0019	8.175 5171	8.183 8685	8.192 0624	30
31	8.149 6027	8.158 4625	8.167 1452	8.175 6576	8.184 0064	8.192 1976	29
32	8.149 7518	8.158 6086	8.167 2884	8.175 7981	8.184 1442	8.192 3329	28
33	8.149 9009	8.158 7547	8.167 4316	8.175 9385	8.184 2819	8.192 4680	27
34	8.150 0500	8.158 9008	8.167 5748	8.176 0789	8.184 4196	8.192 6032	26
35	8.150 1990	8.159 0468	8.167 7179	8.176 2192	8.184 5573	8.192 7383	25
36	8.150 3479	8.159 1927	8.167 8610	8.176 3595	8.184 6949	8.192 8733	24
37	8.150 4968	8.159 3386	8.168 0040	8.176 4998	8.184 8325	8.193 0083	23
38	8.150 6457	8.159 4845	8.168 1469	8.176 6400	8.184 9700	8.193 1433	22
39	8.150 7945	8.159 6303	8.168 2899	8.176 7801	8.185 1075	8.193 2782	21
40	8.150 9432	8.159 7760	8.168 4327	8.176 9202	8.185 2450	8.193 4131	20
41	8.151 0919	8.159 9217	8.168 5756	8.177 0603	8.185 3824	8.193 5479	19
42	8.151 2406	8.160 0674	8.168 7183	8.177 2003	8.185 5197	8.193 6827	18
43	8.151 3891	8.160 2130	8.168 8611	8.177 3403	8.185 6570	8.193 8175	17
44	8.151 5377	8.160 3585	8.169 0038	8.177 4802	8.185 7943	8.193 9522	16
45	8.151 6862	8.160 5040	8.169 1464	8.177 6201	8.185 9315	8.194 0869	15
46	8.151 8346	8.160 6495	8.169 2890	8.177 7599	8.186 0687	8.194 2215	14
47	8.151 9830	8.160 7949	8.169 4315	8.177 8997	8.186 2059	8.194 3561	13
48	8.152 1314	8.160 9403	8.169 5740	8.178 0394	8.186 3430	8.194 4907	12
49	8.152 2796	8.161 0856	8.169 7165	8.178 1791	8.186 4800	8.194 6252	11
50	8.152 4279	8.161 2308	8.169 8589	8.178 3188	8.186 6170	8.194 7596	10
51	8.152 5761	8.161 3761	8.170 0012	8.178 4584	8.186 7540	8.194 8941	9
52	8.152 7242	8.161 5212	8.170 1435	8.178 5980	8.186 8909	8.195 0284	8
53	8.152 8723	8.161 6663	8.170 2858	8.178 7375	8.187 0278	8.195 1628	7
54	8.153 0203	8.161 8114	8.170 4280	8.178 8770	8.187 1646	8.195 2971	6
55	8.153 1683	8.161 9564	8.170 5702	8.179 0164	8.187 3014	8.195 4313	5
56	8.153 3163	8.162 1014	8.170 7123	8.179 1558	8.187 4382	8.195 5656	4
57	8.153 4641	8.162 2463	8.170 8544	8.179 2951	8.187 5749	8.195 6997	3
58	8.153 6120	8.162 3912	8.170 9964	8.179 4344	8.187 7116	8.195 8339	2
59	8.153 7598	8.162 5360	8.171 1384	8.179 5737	8.187 8482	8.195 9680	1
60	8.153 9075	8.162 6808	8.171 2804	8.179 7129	8.187 9848	8.196 1020	0
″	11′	10′	9′	8′	7′	6′	″

″	48′	49′	50′	51′	52′	53′	″
0	8.144 9956	8.153 9516	8.162 7267	8.171 3282	8.179 7626	8.188 0364	60
1	8.145 1464	8.154 0993	8.162 8715	8.171 4701	8.179 9018	8.188 1730	59
2	8.145 2971	8.154 2470	8.163 0162	8.171 6120	8.180 0409	8.188 3095	58
3	8.145 4478	8.154 3946	8.163 1609	8.171 7538	8.180 1800	8.188 4460	57
4	8.145 5984	8.154 5422	8.163 3055	8.171 8956	8.180 3191	8.188 5824	56
5	8.145 7490	8 154 6897	8.163 4501	8.172 0373	8.180 4581	8.188 7188	55
6	8.145 8995	8.154 8371	8.163 5946	8.172 1790	8.180 5971	8.188 8552	54
7	8.146 0500	8.154 9846	8.163 7391	8.172 3207	8.180 7360	8.188 9915	53
8	8.146 2004	8.155 1319	8.163 8835	8.172 4623	8.180 8749	8.189 1278	52
9	8.146 3508	8.155 2792	8.164 0279	8.172 6038	8.181 0137	8.189 2640	51
10	8.146 5011	8.155 4265	8.164 1722	8.172 7453	8.181 1525	8.189 4002	50
11	8.146 6514	8.155 5737	8.164 3165	8.172 8868	8.181 2913	8.189 5363	49
12	8.146 8016	8.155 7209	8.164 4607	8.173 0282	8.181 4300	8.189 6724	48
13	8.146 9518	8.155 8680	8.164 6049	8.173 1696	8.181 5687	8.189 8085	47
14	8.147 1019	8.156 0151	8.164 7490	8.173 3109	8.181 7073	8.189 9445	46
15	8.147 2520	8.156 1621	8.164 8931	8.173 4522	8.181 8459	8.190 0805	45
16	8.147 4020	8.156 3090	8.165 0372	8.173 5934	8.181 9844	8.190 2164	44
17	8.147 5519	8.156 4559	8.165 1812	8.173 7346	8.182 1229	8.190 3523	43
18	8.147 7018	8.156 6028	8.165 3251	8.173 8757	8.182 2613	8.190 4881	42
19	8.147 8517	8.156 7496	8.165 4690	8.174 0168	8.182 3997	8.190 6239	41
20	8.148 0015	8.156 8964	8.165 6128	8.174 1579	8.182 5381	8.190 7597	40
21	8.148 1512	8.157 0431	8.165 7566	8.174 2989	8.182 6764	8.190 8954	39
22	8.148 3009	8.157 1898	8.165 9004	8.174 4398	8.182 8146	8.191 0311	38
23	8.148 4506	8.157 3364	8.166 0441	8.174 5807	8.182 9529	8.191 1667	37
24	8.148 6002	8.157 4830	8.166 1878	8.174 7216	8.183 0910	8.191 3023	36
25	8.148 7497	8.157 6295	8.166 3314	8.174 8624	8.183 2292	8.191 4379	35
26	8.148 8992	8.157 7759	8.166 4749	8.175 0032	8.183 3673	8.191 5734	34
27	8.149 0487	8.157 9224	8.166 6185	8.175 1439	8.183 5053	8.191 7088	33
28	8.149 1980	8.158 0687	8.166 7619	8.175 2846	8.183 6433	8.191 8442	32
29	8.149 3474	8.158 2151	8.166 9054	8.175 4252	8.183 7813	8.191 9796	31
30	8.149 4967	8.158 3613	8.167 0487	8.175 5658	8.183 9192	8.192 1150	30
31	8.149 6459	8.158 5076	8.167 1921	8.175 7064	8.184 0571	8.192 2503	29
32	8.149 7951	8.158 6537	8.167 3353	8.175 8469	8.184 1949	8.192 3855	28
33	8.149 9442	8.158 7999	8.167 4786	8.175 9873	8.184 3327	8.192 5207	27
34	8.150 0933	8.158 9459	8.167 6218	8.176 1278	8.184 4704	8.192 6559	26
35	8.150 2423	8.159 0920	8.167 7649	8.176 2681	8.184 6081	8.192 7910	25
36	8.150 3913	8.159 2379	8.167 9080	8.176 4084	8.184 7458	8.192 9261	24
37	8.150 5402	8.159 3839	8.168 0510	8.176 5487	8.184 8834	8.193 0611	23
38	8.150 6891	8.159 5297	8.168 1940	8.176 6889	8.185 0209	8.193 1961	22
39	8.150 8380	8.159 6756	8.168 3370	8.176 8291	8.185 1585	8.193 3311	21
40	8.150 9867	8.159 8213	8.168 4799	8.176 9693	8.185 2959	8.193 4660	20
41	8.151 1355	8.159 9671	8.168 6228	8.177 1094	8.185 4334	8.193 6009	19
42	8.151 2841	8.160 1128	8.168 7656	8.177 2494	8.185 5708	8.193 7357	18
43	8.151 4328	8.160 2584	8.168 9083	8.177 3894	8.185 7081	8.193 8705	17
44	8.151 5813	8.160 4040	8.169 0510	8.177 5294	8.185 8454	8.194 0053	16
45	8.151 7299	8.160 5495	8.169 1937	8.177 6693	8.185 9827	8.194 1400	15
46	8.151 8783	8.160 6950	8.169 3363	8.177 8091	8.186 1199	8.194 2746	14
47	8.152 0267	8.160 8404	8.169 4789	8.177 9490	8.186 2571	8.194 4093	13
48	8.152 1751	8.160 9858	8.169 6214	8.178 0887	8.186 3942	8.194 5439	12
49	8.152 3234	8.161 1312	8.169 7639	8.178 2285	8.186 5313	8.194 6784	11
50	8.152 4717	8.161 2765	8.169 9064	8.178 3682	8.186 6683	8.194 8129	10
51	8.152 6199	8.161 4217	8.170 0487	8.178 5078	8.186 8053	8.194 9473	9
52	8.152 7681	8.161 5669	8.170 1911	8.178 6474	8.186 9423	8.195 0818	8
53	8.152 9162	8.161 7121	8.170 3334	8.178 7870	8.187 0792	8.195 2161	7
54	8.153 0643	8.161 8572	8.170 4756	8.178 9265	8.187 2161	8.195 3505	6
55	8.153 2123	8.162 0022	8.170 6178	8.179 0659	8.187 3529	8.195 4848	5
56	8.153 3603	8.162 1472	8.170 7600	8.179 2054	8.187 4897	8.195 6190	4
57	8.153 5082	8.162 2922	8.170 9021	8.179 3447	8.187 6264	8.195 7532	3
58	8.153 6560	8.162 4371	8.171 0442	8.179 4841	8.187 7631	8.195 8874	2
59	8.153 8038	8.162 5819	8.171 1862	8.179 6233	8.187 8998	8.196 0215	1
60	8.153 9516	8.162 7267	8.171 3282	8.179 7626	8.188 0364	8.196 1556	0
″	11′	10′	9′	8′	7′	6′	″

″	54′	55′	56′	57′	58′	59′	″
0	8.196 1020	8.204 0703	8.211 8949	8.219 5811	8.227 1335	8.234 5568	60
1	8.196 2360	8.204 2019	8.212 0242	8.219 7080	8.227 2583	8.234 6795	59
2	8.196 3700	8.204 3334	8.212 1533	8.219 8349	8.227 3830	8.234 8021	58
3	8.196 5039	8.204 4649	8.212 2825	8.219 9618	8.227 5077	8.234 9247	57
4	8.196 6378	8.204 5963	8.212 4116	8.220 0887	8.227 6324	8.235 0472	56
5	8.196 7717	8.204 7277	8.212 5407	8.220 2155	8.227 7570	8.235 1697	55
6	8.196 9055	8.204 8591	8.212 6697	8.220 3423	8.227 8816	8.235 2922	54
7	8.197 0392	8.204 9905	8.212 7987	8.220 4690	8.228 0061	8.235 4147	53
8	8.197 1729	8.205 1218	8.212 9277	8.220 5957	8.228 1306	8.235 5371	52
9	8.197 3066	8.205 2530	8.213 0566	8.220 7223	8.228 2551	8.235 6594	51
10	8.197 4403	8.205 3842	8.213 1854	8.220 8490	8.228 3796	8.235 7818	50
11	8.197 5739	8.205 5154	8.213 3143	8.220 9756	8.228 5040	8.235 9041	49
12	8.197 7074	8.205 6465	8.213 4431	8.221 1021	8.228 6284	8.236 0264	48
13	8.197 8409	8.205 7776	8.213 5719	8.221 2286	8.228 7527	8.236 1486	47
14	8.197 9744	8.205 9087	8.213 7006	8.221 3551	8.228 8770	8.236 2708	46
15	8.198 1078	8.206 0397	8.213 8293	8.221 4815	8.229 0013	8.236 3930	45
16	8.198 2412	8.206 1707	8.213 9579	8.221 6079	8.229 1255	8.236 5151	44
17	8.198 3746	8.206 3016	8.214 0865	8.221 7343	8.229 2497	8.236 6372	43
18	8.198 5079	8.206 4325	8.214 2151	8.221 8606	8.229 3739	8.236 7593	42
19	8.198 6412	8.206 5634	8.214 3436	8.221 9869	8.229 4980	8.236 8813	41
20	8.198 7744	8.206 6942	8.214 4721	8.222 1132	8.229 6221	8.237 0033	40
21	8.198 9076	8.206 8250	8.214 6006	8.222 2394	8.229 7461	8.237 1253	39
22	8.199 0407	8.206 9557	8.214 7290	8.222 3656	8.229 8701	8.237 2472	38
23	8.199 1738	8.207 0864	8.214 8574	8.222 4917	8.229 9941	8.237 3691	37
24	8.199 3069	8.207 2171	8.214 9857	8.222 6178	8.230 1181	8.237 4910	36
25	8.199 4399	8.207 3477	8.215 1140	8.222 7439	8.230 2420	8.237 6128	35
26	8.199 5729	8.207 4783	8.215 2423	8.222 8699	8.230 3659	8.237 7346	34
27	8.199 7058	8.207 6088	8.215 3705	8.222 9959	8.230 4897	8.237 8563	33
28	8.199 8387	8.207 7393	8.215 4987	8.223 1219	8.230 6135	8.237 9781	32
29	8.199 9716	8.207 8698	8.215 6269	8.223 2478	8.230 7373	8.238 0997	31
30	8.200 1044	8.208 0002	8.215 7550	8.223 3737	8.230 8610	8.238 2214	30
31	8.200 2372	8.208 1306	8.215 8831	8.223 4996	8.230 9847	8.238 3430	29
32	8.200 3699	8.208 2610	8.216 0111	8.223 6254	8.231 1084	8.238 4646	28
33	8.200 5026	8.208 3913	8.216 1391	8.223 7512	8.231 2320	8.238 5862	27
34	8.200 6353	8.208 5216	8.216 2671	8.223 8769	8.231 3556	8.238 7077	26
35	8.200 7679	8.208 6518	8.216 3950	8.224 0026	8.231 4792	8.238 8292	25
36	8.200 9005	8.208 7820	8.216 5229	8.224 1283	8.231 6027	8.238 9506	24
37	8.201 0330	8.208 9121	8.216 6508	8.224 2539	8.231 7262	8.239 0720	23
38	8.201 1655	8.209 0422	8.216 7786	8.224 3795	8.231 8496	8.239 1934	22
39	8.201 2980	8.209 1723	8.216 9064	8.224 5051	8.231 9731	8.239 3148	21
40	8.201 4304	8.209 3024	8.217 0341	8.224 6306	8.232 0965	8.239 4361	20
41	8.201 5628	8.209 4324	8.217 1618	8.224 7561	8.232 2198	8.239 5574	19
42	8.201 6951	8.209 5623	8.217 2895	8.224 8815	8.232 3431	8.239 6786	18
43	8.201 8274	8.209 6922	8.217 4171	8.225 0070	8.232 4664	8.239 7998	17
44	8.201 9597	8.209 8221	8.217 5447	8.225 1323	8.232 5896	8.239 9210	16
45	8.202 0919	8.209 9520	8.217 6723	8.225 2577	8.232 7128	8.240 0422	15
46	8.202 2241	8.210 0818	8.217 7998	8.225 3830	8.232 8360	8.240 1633	14
47	8.202 3562	8.210 2115	8.217 9273	8.225 5083	8.232 9592	8.240 2844	13
48	8.202 4883	8.210 3412	8.218 0547	8.225 6335	8.233 0823	8.240 4054	12
49	8.202 6203	8.210 4709	8.218 1821	8.225 7587	8.233 2053	8.240 5264	11
50	8.202 7523	8.210 6006	8.218 3095	8.225 8839	8.233 3284	8.240 6474	10
51	8.202 8843	8.210 7302	8.218 4368	8.226 0090	8.233 4514	8.240 7683	9
52	8.203 0163	8.210 8598	8.218 5641	8.226 1341	8.233 5743	8.240 8892	8
53	8.203 1481	8.210 9893	8.218 6913	8.226 2591	8.233 6973	8.241 0101	7
54	8.203 2800	8.211 1188	8.218 8186	8.226 3841	8.233 8202	8.241 1310	6
55	8.203 4118	8.211 2482	8.218 9457	8.226 5091	8.233 9430	8.241 2518	5
56	8.203 5436	8.211 3777	8.219 0729	8.226 6341	8.234 0659	8.241 3725	4
57	8.203 6753	8.211 5070	8.219 2000	8.226 7590	8.234 1886	8.241 4933	3
58	8.203 8070	8.211 6364	8.219 3270	8.226 8839	8.234 3114	8.241 6140	2
59	8.203 9387	8.211 7657	8.219 4541	8.227 0087	8.234 4341	8.241 7347	1
60	8.204 0703	8.211 8949	8.219 5811	8.227 1335	8.234 5568	8.241 8553	0
″	5′	4′	3′	2′	1′	0′	″

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″	54′	55′	56′	57′	58′	59′	″
0	8.196 1556	8.204 1259	8.211 9526	8.219 6408	8.227 1953	8.234 6208	60
1	8.196 2896	8.204 2575	8.212 0818	8.219 7678	8.227 3201	8.234 7435	59
2	8.196 4236	8.204 3890	8.212 2110	8.219 8947	8.227 4449	8.234 8661	58
3	8.196 5576	8.204 5206	8.212 3402	8.220 0216	8.227 5696	8.234 9887	57
4	8.196 6915	8.204 6521	8.212 4694	8.220 1485	8.227 6943	8.235 1113	56
5	8.196 8254	8.204 7835	8.212 5985	8.220 2754	8.227 8190	8.235 2339	55
6	8.196 9592	8.204 9149	8.212 7275	8.220 4022	8.227 9436	8.235 3564	54
7	8.197 0930	8.205 0463	8.212 8566	8.220 5289	8.228 0682	8.235 4789	53
8	8.197 2268	8.205 1776	8.212 9855	8.220 6557	8.228 1927	8.235 6013	52
9	8.197 3605	8.205 3089	8.213 1145	8.220 7824	8.228 3173	8.235 7237	51
10	8.197 4942	8.205 4401	8.213 2434	8.220 9090	8.228 4417	8.235 8461	50
11	8.197 6278	8.205 5714	8.213 3723	8.221 0356	8.228 5662	8.235 9684	49
12	8.197 7614	8.205 7025	8.213 5011	8.221 1622	8.228 6906	8.236 0908	48
13	8.197 8949	8.205 8337	8.213 6299	8.221 2888	8.228 8150	8.236 2130	47
14	8.198 0284	8.205 9647	8.213 7587	8.221 4153	8.228 9393	8.236 3353	46
15	8.198 1619	8.206 0958	8.213 8874	8.221 5418	8.229 0636	8.236 4575	45
16	8.198 2953	8.206 2268	8.214 0161	8.221 6682	8.229 1879	8.236 5796	44
17	8.198 4287	8.206 3578	8.214 1447	8.221 7946	8.229 3121	8.236 7018	43
18	8.198 5621	8.206 4887	8.214 2733	8.221 9210	8.229 4363	8.236 8239	42
19	8.198 6954	8.206 6196	8.214 4019	8.222 0473	8.229 5605	8.236 9460	41
20	8.198 8286	8.206 7505	8.214 5304	8.222 1736	8.229 6846	8.237 0680	40
21	8.198 9619	8.206 8813	8.214 6589	8.222 2998	8.229 8087	8.237 1900	39
22	8.199 0950	8.207 0120	8.214 7874	8.222 4260	8.229 9327	8.237 3120	38
23	8.199 2282	8.207 1428	8.214 9158	8.222 5522	8.230 0568	8.237 4339	37
24	8.199 3613	8.207 2735	8.215 0442	8.222 6784	8.230 1807	8.237 5558	36
25	8.199 4943	8.207 4041	8.215 1725	8.222 8045	8.230 3047	8.237 6776	35
26	8.199 6273	8.207 5348	8.215 3008	8.222 9305	8.230 4286	8.237 7995	34
27	8.199 7603	8.207 6653	8.215 4291	8.223 0566	8.230 5525	8.237 9213	33
28	8.199 8933	8.207 7959	8.215 5573	8.223 1826	8.230 6763	8.238 0430	32
29	8.200 0262	8.207 9264	8.215 6855	8.223 3085	8.230 8001	8.238 1648	31
30	8.200 1590	8.208 0568	8.215 8137	8.223 4345	8.230 9239	8.238 2865	30
31	8.200 2918	8.208 1873	8.215 9418	8.223 5604	8.231 0476	8.238 4081	29
32	8.200 4246	8.208 3176	8.216 0699	8.223 6862	8.231 1713	8.238 5297	28
33	8.200 5573	8.208 4480	8.216 1979	8.223 8120	8.231 2950	8.238 6513	27
34	8.200 6900	8.208 5783	8.216 3259	8.223 9378	8.231 4186	8.238 7729	26
35	8.200 8227	8.208 7086	8.216 4539	8.224 0635	8.231 5422	8.238 8944	25
36	8.200 9553	8.208 8388	8.216 5818	8.224 1892	8.231 6658	8.239 0159	24
37	8.201 0879	8.208 9690	8.216 7097	8.224 3149	8.231 7893	8.239 1373	23
38	8.201 2204	8.209 0991	8.216 8375	8.224 4405	8.231 9128	8.239 2588	22
39	8.201 3529	8.209 2292	8.216 9653	8.224 5661	8.232 0363	8.239 3802	21
40	8.201 4853	8.209 3593	8.217 0931	8.224 6917	8.232 1597	8.239 5015	20
41	8.201 6177	8.209 4893	8.217 2209	8.224 8172	8.232 2831	8.239 6228	19
42	8.201 7501	8.209 6193	8.217 3486	8.224 9427	8.232 4064	8.239 7441	18
43	8.201 8824	8.209 7493	8.217 4762	8.225 0682	8.232 5297	8.239 8654	17
44	8.202 0147	8.209 8792	8.217 6038	8.225 1936	8.232 6530	8.239 9866	16
45	8.202 1470	8.210 0091	8.217 7314	8.225 3190	8.232 7763	8.240 1078	15
46	8.202 2792	8.210 1389	8.217 8590	8.225 4443	8.232 8995	8.240 2289	14
47	8.202 4113	8.210 2687	8.217 9865	8.225 5696	8.233 0227	8.240 3500	13
48	8.202 5435	8.210 3985	8.218 1140	8.225 6949	8.233 1458	8.240 4711	12
49	8.202 6756	8.210 5282	8.218 2414	8.225 8201	8.233 2689	8.240 5922	11
50	8.202 8076	8.210 6579	8.218 3688	8.225 9453	8.233 3920	8.240 7132	10
51	8.202 9396	8.210 7875	8.218 4962	8.226 0705	8.233 5150	8.240 8342	9
52	8.203 0716	8.210 9171	8.218 6235	8.226 1956	8.233 6380	8.240 9551	8
53	8.203 2035	8.211 0467	8.218 7508	8.226 3207	8.233 7610	8.241 0760	7
54	8.203 3354	8.211 1762	8.218 8780	8.226 4457	8.233 8839	8.241 1969	6
55	8.203 4672	8.211 3057	8.219 0053	8.226 5708	8.234 0068	8.241 3177	5
56	8.203 5990	8.211 4351	8.219 1324	8.226 6957	8.234 1297	8.241 4386	4
57	8.203 7308	8.211 5646	8.219 2596	8.226 8207	8.234 2525	8.241 5593	3
58	8.203 8625	8.211 6939	8.219 3867	8.226 9456	8.234 3753	8.241 6801	2
59	8.203 9942	8.211 8233	8.219 5137	8.227 0705	8.234 4980	8.241 8008	1
60	8.204 1259	8.211 9526	8.219 6408	8.227 1953	8.234 6208	8.241 9215	0
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0	8.241 8553	8.249 0332	8.256 0943	8.263 0424	8.269 8810	8.276 6136	60
1	8.241 9759	8.249 1518	8.256 2110	8.263 1572	8.269 9941	8.276 7249	59
2	8.242 0965	8.249 2704	8.256 3277	8.263 2721	8.270 1071	8.276 8362	58
3	8.242 2170	8.249 3890	8.256 4443	8.263 3869	8.270 2201	8.276 9475	57
4	8.242 3376	8.249 5075	8.256 5609	8.263 5016	8.270 3331	8.277 0587	56
5	8.242 4580	8.249 6260	8.256 6775	8.263 6164	8.270 4461	8.277 1700	55
6	8.242 5785	8.249 7445	8.256 7941	8.263 7311	8.270 5590	8.277 2811	54
7	8.242 6989	8.249 8629	8.256 9106	8.263 8458	8.270 6719	8.277 3923	53
8	8.242 8192	8.249 9813	8.257 0271	8.263 9604	8.270 7847	8.277 5034	52
9	8.242 9396	8.250 0997	8.257 1436	8.264 0750	8.270 8976	8.277 6145	51
10	8.243 0599	8.250 2180	8.257 2600	8.264 1896	8.271 0104	8.277 7256	50
11	8.243 1802	8.250 3363	8.257 3764	8.264 3042	8.271 1232	8.277 8367	49
12	8.243 3004	8.250 4546	8.257 4928	8.264 4187	8.271 2359	8.277 9477	48
13	8.243 4206	8.250 5728	8.257 6091	8.264 5332	8.271 3486	8.278 0587	47
14	8.243 5408	8.250 6911	8.257 7255	8.264 6477	8.271 4613	8.278 1696	46
15	8.243 6609	8.250 8092	8.257 8417	8.264 7621	8.271 5740	8.278 2806	45
16	8.243 7810	8.250 9274	8.257 9580	8.264 8766	8.271 6866	8.278 3915	44
17	8.243 9011	8.251 0455	8.258 0742	8.264 9909	8.271 7992	8.278 5023	43
18	8.244 0212	8.251 1636	8.258 1904	8.265 1053	8.271 9118	8.278 6132	42
19	8.244 1412	8.251 2816	8.258 3065	8.265 2196	8.272 0243	8.278 7240	41
20	8.244 2611	8.251 3996	8.258 4227	8.265 3339	8.272 1368	8.278 8348	40
21	8.244 3811	8.251 5176	8.258 5388	8.265 4482	8.272 2493	8.278 9456	39
22	8.244 5010	8.251 6356	8.258 6548	8.265 5624	8.272 3618	8.279 0563	38
23	8.244 6209	8.251 7535	8.258 7709	8.265 6766	8.272 4742	8.279 1670	37
24	8.244 7407	8.251 8714	8.258 8869	8.265 7908	8.272 5866	8.279 2777	36
25	8.244 8605	8.251 9893	8.259 0028	8.265 9049	8.272 6990	8.279 3883	35
26	8.244 9803	8.252 1071	8.259 1188	8.266 0190	8.272 8113	8.279 4989	34
27	8.245 1000	8.252 2249	8.259 2347	8.266 1331	8.272 9236	8.279 6095	33
28	8.245 2198	8.252 3426	8.259 3505	8.266 2471	8.273 0359	8.279 7201	32
29	8.245 3394	8.252 4604	8.259 4664	8.266 3612	8.273 1481	8.279 8306	31
30	8.245 4591	8.252 5781	8.259 5822	8.266 4751	8.273 2604	8.279 9411	30
31	8.245 5787	8.252 6957	8.259 6980	8.266 5891	8.273 3725	8.280 0516	29
32	8.245 6983	8.252 8134	8.259 8137	8.266 7030	8.273 4847	8.280 1621	28
33	8.245 8178	8.252 9310	8.259 9295	8.266 8169	8.273 5968	8.280 2725	27
34	8.245 9373	8.253 0485	8.260 0452	8.266 9308	8.273 7089	8.280 3829	26
35	8.246 0568	8.253 1661	8.260 1608	8.267 0446	8.273 8210	8.280 4933	25
36	8.246 1762	8.253 2836	8.260 2764	8.267 1585	8.273 9331	8.280 6036	24
37	8.246 2957	8.253 4011	8.260 3920	8.267 2722	8.274 0451	8.280 7139	23
38	8.246 4150	8.253 5185	8.260 5076	8.267 3860	8.274 1571	8.280 8242	22
39	8.246 5344	8.253 6359	8.260 6232	8.267 4997	8.274 2690	8.280 9345	21
40	8.246 6537	8.253 7533	8.260 7387	8.267 6134	8.274 3810	8.281 0447	20
41	8.246 7730	8.253 8706	8.260 8541	8.267 7271	8.274 4929	8.281 1549	19
42	8.246 8922	8.253 9880	8.260 9696	8.267 8407	8.274 6048	8.281 2650	18
43	8.247 0115	8.254 1052	8.261 0850	8.267 9543	8.274 7166	8.281 3752	17
44	8.247 1306	8.254 2225	8.261 2004	8.268 0679	8.274 8284	8.281 4853	16
45	8.247 2498	8.254 3397	8.261 3157	8.268 1814	8.274 9402	8.281 5954	15
46	8.247 3689	8.254 4569	8.261 4311	8.268 2949	8.275 0520	8.281 7055	14
47	8.247 4880	8.254 5741	8.261 5463	8.268 4084	8.275 1637	8.281 8155	13
48	8.247 6071	8.254 6912	8.261 6616	8.268 5219	8.275 2754	8.281 9255	12
49	8.247 7261	8.254 8083	8.261 7768	8.268 6353	8.275 3871	8.282 0355	11
50	8.247 8451	8.254 9254	8.261 8920	8.268 7487	8.275 4987	8.282 1454	10
51	8.247 9640	8.255 0424	8.262 0072	8.268 8620	8.275 6103	8.282 2553	9
52	8.248 0829	8.255 1594	8.262 1223	8.268 9754	8.275 7219	8.282 3652	8
53	8.248 2018	8.255 2764	8.262 2375	8.269 0887	8.275 8335	8.282 4751	7
54	8.248 3207	8.255 3933	8.262 3525	8.269 2020	8.275 9450	8.282 5849	6
55	8.248 4395	8.255 5102	8.262 4676	8.269 3152	8.276 0565	8.282 6947	5
56	8.248 5583	8.255 6271	8.262 5826	8.269 4284	8.276 1680	8.282 8045	4
57	8.248 6771	8.255 7439	8.262 6976	8.269 5416	8.276 2794	8.282 9143	3
58	8.248 7958	8.255 8607	8.262 8125	8.269 6548	8.276 3909	8.283 0240	2
59	8.248 9145	8.255 9775	8.262 9275	8.269 7679	8.276 5022	8.283 1337	1
60	8.249 0332	8.256 0943	8.263 0424	8.269 8810	8.276 6136	8.283 2434	0
″	59′	58′	57′	56′	55′	54′	″

cos 88°

tang 1°

″	0′	1′	2′	3′	4′	5′	″
0	8.241 9215	8.249 1015	8.256 1649	8.263 1153	8.269 9563	8.276 6912	60
1	8.242 0421	8.249 2202	8.256 2817	8.263 2302	8.270 0694	8.276 8026	59
2	8.242 1627	8.249 3388	8.256 3984	8.263 3451	8.270 1825	8.276 9139	58
3	8 242 2833	8.249 4574	8.256 5151	8.263 4599	8.270 2955	8.277 0253	57
4	8.242 4038	8.249 5760	8.256 6317	8.263 5747	8.270 4085	8.277 1365	56
5	8.242 5244	8.249 6946	8.256 7484	8.263 6895	8.270 5215	8.277 2478	55
6	8.242 6448	8.249 8131	8.256 8650	8.263 8043	8.270 6345	8.277 3590	54
7	8.242 7653	8.249 9315	8.256 9815	8.263 9190	8.270 7474	8.277 4702	53
8	8.242 8857	8.250 0500	8.257 0981	8.264 0337	8.270 8603	8.277 5814	52
9	8.243 0061	8.250 1684	8.257 2146	8.264 1483	8.270 9732	8.277 6925	51
10	8.243 1264	8.250 2868	8.257 3310	8.264 2630	8.271 0860	8.277 8036	50
11	8.243 2467	8.250 4051	8.257 4475	8.264 3776	8.271 1989	8.277 9147	49
12	8.243 3670	8.250 5234	8.257 5639	8.264 4921	8.271 3116	8.278 0258	48
13	8.243 4872	8.250 6417	8.257 6803	8.264 6067	8.271 4244	8.278 1368	47
14	8.243 6075	8.250 7600	8.257 7966	8.264 7212	8.271 5371	8.278 2478	46
15	8.243 7276	8.250 8782	8.257 9129	8.264 8357	8.271 6498	8.278 3588	45
16	8.243 8478	8.250 9964	8.258 0292	8.264 9501	8.271 7625	8.278 4697	44
17	8.243 9679	8.251 1145	8.258 1455	8.265 0645	8.271 8751	8.278 5806	43
18	8.244 0880	8.251 2326	8.258 2617	8.265 1789	8.271 9877	8.278 6915	42
19	8.244 2080	8.251 3507	8.258 3779	8.265 2933	8.272 1003	8.278 8024	41
20	8.244 3280	8.251 4688	8.258 4941	8.265 4076	8.272 2129	8.278 9132	40
21	8.244 4480	8.251 5868	8.258 6102	8.265 5219	8.272 3254	8.279 0240	39
22	8.244 5680	8.251 7048	8.258 7263	8.265 6362	8.272 4379	8.279 1348	38
23	8.244 6879	8.251 8227	8.258 8424	8.265 7504	8.272 5504	8.279 2455	37
24	8.244 8077	8.251 9407	8.258 9584	8.265 8646	8.272 6628	8.279 3563	36
25	8.244 9276	8.252 0586	8.259 0744	8.265 9788	8.272 7752	8.279 4670	35
26	8.245 0474	8.252 1764	8.259 1904	8.266 0929	8.272 8876	8.279 5776	34
27	8.245 1672	8.252 2943	8.259 3063	8.266 2071	8.272 9999	8.279 6882	33
28	8.245 2869	8.252 4121	8.259 4223	8.266 3212	8.273 1122	8.279 7988	32
29	8.245 4066	8.252 5298	8.259 5381	8.266 4352	8.273 2245	8.279 9094	31
30	8.245 5263	8.252 6476	8.259 6540	8.266 5492	8.273 3368	8.280 0200	30
31	8.245 6460	8.252 7653	8.259 7698	8.266 6632	8.273 4490	8.280 1305	29
32	8.245 7656	8.252 8829	8.259 8856	8.266 7772	8.273 5612	8.280 2410	28
33	8.245 8852	8.253 0006	8.260 0014	8.266 8911	8.273 6734	8.280 3515	27
34	8.246 0047	8.253 1182	8.260 1171	8.267 0051	8.273 7856	8.280 4619	26
35	8.246 1242	8.253 2358	8.260 2328	8.267 1189	8.273 8977	8.280 5723	25
36	8.246 2437	8.253 3533	8.260 3485	8.267 2328	8.274 0098	8.280 6827	24
37	8.246 3632	8.253 4708	8.260 4641	8.267 3466	8.274 1218	8.280 7930	23
38	8.246 4826	8.253 5883	8.260 5797	8.267 4604	8.274 2338	8.280 9034	22
39	8.246 6020	8.253 7058	8.260 6953	8.267 5742	8.274 3458	8.281 0136	21
40	8.246 7213	8.253 8232	8.260 8108	8.267 6879	8.274 4578	8.281 1239	20
41	8.246 8407	8.253 9406	8.260 9263	8.267 8016	8.274 5698	8.281 2342	19
42	8.246 9599	8.254 0579	8.261 0418	8.267 9153	8.274 6817	8.281 3444	18
43	8.247 0792	8.254 1752	8.261 1573	8.268 0289	8.274 7936	8.281 4545	17
44	8.247 1984	8.254 2925	8.261 2727	8.268 1425	8.274 9054	8.281 5647	16
45	8.247 3176	8.254 4098	8.261 3881	8.268 2561	8.275 0173	8.281 6748	15
46	8.247 4368	8.254 5270	8.261 5034	8.268 3696	8.275 1291	8.281 7849	14
47	8.247 5559	8.254 6442	8.261 6188	8.268 4832	8.275 2408	8.281 8950	13
48	8.247 6750	8.254 7614	8.261 7341	8.268 5967	8.275 3526	8.282 0051	12
49	8.247 7940	8.254 8785	8.261 8493	8.268 7101	8.275 4643	8.282 1151	11
50	8.247 9131	8.254 9956	8.261 9646	8.268 8236	8.275 5760	8.282 2251	10
51	8.248 0321	8.255 1127	8.262 0798	8.268 9370	8.275 6876	8.282 3350	9
52	8.248 1510	8.255 2297	8.262 1950	8.269 0503	8.275 7992	8.282 4450	8
53	8.248 2699	8.255 3467	8.262 3101	8.269 1637	8.275 9108	8.282 5549	7
54	8.248 3888	8.255 4637	8.262 4252	8.269 2770	8.276 0224	8.282 6647	6
55	8.248 5077	8.255 5806	8.262 5403	8.269 3903	8.276 1340	8.282 7746	5
56	8.248 6265	8.255 6976	8.262 6554	8.269 5035	8.276 2455	8.282 8844	4
57	8.248 7453	8.255 8144	8.262 7704	8.269 6168	8.276 3570	8.282 9942	3
58	8.248 8641	8.255 9313	8.262 8854	8.269 7300	8.276 4684	8.283 1040	2
59	8.248 9828	8.256 0481	8.263 0004	8.269 8431	8.276 5798	8.283 2137	1
60	8.249 1015	8.256 1649	8.263 1153	8.269 9563	8.276 6912	8.283 3234	0
″	59′	58′	57′	56′	55′	54′	″

cotg 88°

″	6′	7′	8′	9′	10′	11′	″
0	8.283 2434	8.289 7734	8.296 2067	8.302 5460	8.308 7941	8.314 9536	60
1	8.283 3530	8.289 8814	8.296 3131	8.302 6509	8.308 8975	8.315 0555	59
2	8.283 4626	8.289 9894	8.296 4195	8.302 7558	8.309 0009	8.315 1574	58
3	8.283 5722	8.290 0974	8.296 5259	8.302 8606	8.309 1042	8.315 2593	57
4	8.283 6818	8.290 2053	8.296 6322	8.302 9654	8.309 2075	8.315 3611	56
5	8.283 7913	8.290 3132	8.296 7385	8.303 0702	8.309 3108	8.315 4630	55
6	8.283 9008	8.290 4211	8.296 8448	8.303 1749	8.309 4140	8.315 5648	54
7	8.284 0103	8.290 5289	8.296 9511	8.303 2796	8.309 5173	8.315 6665	53
8	8.284 1197	8.290 6367	8.297 0573	8.303 3843	8.309 6205	8.315 7683	52
9	8.284 2292	8.290 7445	8.297 1635	8.303 4890	8.309 7237	8.315 8700	51
10	8.284 3386	8.290 8523	8.297 2697	8.303 5937	8.309 8268	8.315 9717	50
11	8.284 4479	8.290 9600	8.297 3759	8.303 6983	8.309 9299	8.316 0734	49
12	8.284 5573	8.291 0677	8.297 4820	8.303 8029	8.310 0330	8.316 1751	48
13	8.284 6666	8.291 1754	8.297 5881	8.303 9075	8.310 1361	8.316 2767	47
14	8.284 7759	8.291 2831	8.297 6942	8.304 0120	8.310 2392	8.316 3783	46
15	8.284 8851	8.291 3907	8.297 8002	8.304 1165	8.310 3422	8.316 4799	45
16	8.284 9943	8.291 4983	8.297 9063	8.304 2210	8.310 4452	8.316 5815	44
17	8.285 1035	8.291 6059	8.298 0123	8.304 3255	8.310 5482	8.316 6830	43
18	8.285 2127	8.291 7134	8.298 1182	8.304 4299	8.310 6512	8.316 7845	42
19	8.285 3219	8.291 8210	8.298 2242	8.304 5344	8.310 7541	8.316 8860	41
20	8.285 4310	8.291 9285	8.298 3301	8.304 6388	8.310 8570	8.316 9875	40
21	8.285 5401	8.292 0359	8.298 4360	8.304 7431	8.310 9599	8.317 0889	39
22	8.285 6492	8.292 1434	8.298 5419	8.304 8475	8.311 0628	8.317 1903	38
23	8.285 7582	8.292 2508	8.298 6477	8.304 9518	8.311 1656	8.317 2917	37
24	8.285 8672	8.292 3582	8.298 7536	8.305 0561	8.311 2684	8.317 3931	36
25	8.285 9762	8.292 4656	8.298 8594	8.305 1604	8.311 3712	8.317 4945	35
26	8.286 0851	8.292 5729	8.298 9651	8.305 2646	8.311 4740	8.317 5958	34
27	8.286 1941	8.292 6802	8.299 0709	8.305 3688	8.311 5767	8.317 6971	33
28	8.286 3030	8.292 7875	8.299 1766	8.305 4730	8.311 6794	8.317 7984	32
29	8.286 4118	8.292 8948	8.299 2823	8.305 5772	8.311 7821	8.317 8996	31
30	8.286 5207	8.293 0020	8.299 3879	8.305 6813	8.311 8848	8.318 0008	30
31	8.286 6295	8.293 1092	8.299 4936	8.305 7855	8.311 9874	8.318 1021	29
32	8.286 7383	8.293 2164	8.299 5992	8.305 8896	8.312 0901	8.318 2032	28
33	8.286 8471	8.293 3235	8.299 7048	8.305 9936	8.312 1927	8.318 3044	27
34	8.286 9558	8.293 4306	8.299 8104	8.306 0977	8.312 2952	8.318 4055	26
35	8.287 0645	8.293 5378	8.299 9159	8.306 2017	8.312 3978	8.318 5067	25
36	8.287 1732	8.293 6448	8.300 0214	8.306 3057	8.312 5003	8.318 6077	24
37	8.287 2818	8.293 7519	8.300 1269	8.306 4097	8.312 6028	8.318 7088	23
38	8.287 3905	8.293 8589	8.300 2324	8.306 5136	8.312 7053	8.318 8098	22
39	8.287 4991	8.293 9659	8.300 3378	8.306 6175	8.312 8077	8.318 9109	21
40	8.287 6076	8.294 0729	8.300 4432	8.306 7214	8.312 9101	8.319 0119	20
41	8.287 7162	8.294 1798	8.300 5486	8.306 8253	8.313 0125	8.319 1128	19
42	8.287 8247	8.294 2867	8.300 6539	8.306 9291	8.313 1149	8.319 2138	18
43	8.287 9332	8.294 3936	8.300 7593	8.307 0330	8.313 2173	8.319 3147	17
44	8.288 0417	8.294 5005	8.300 8646	8.307 1368	8.313 3196	8.319 4156	16
45	8.288 1501	8.294 6073	8.300 9699	8.307 2405	8.313 4219	8.319 5165	15
46	8.288 2585	8.294 7141	8.301 0751	8.307 3443	8.313 5242	8.319 6173	14
47	8.288 3669	8.294 8209	8.301 1804	8.307 4480	8.313 6264	8.319 7182	13
48	8.288 4752	8.294 9277	8.301 2856	8.307 5517	8.313 7287	8.319 8190	12
49	8.288 5836	8.295 0344	8.301 3907	8.307 6554	8.313 8309	8.319 9198	11
50	8.288 6919	8.295 1411	8.301 4959	8.307 7590	8.313 9331	8.320 0205	10
51	8.288 8002	8.295 2478	8.301 6010	8.307 8626	8.314 0352	8.320 1213	9
52	8.288 9084	8.295 3544	8.301 7061	8.307 9662	8.314 1374	8.320 2220	8
53	8.289 0166	8.295 4611	8.301 8112	8.308 0698	8.314 2395	8.320 3227	7
54	8.289 1248	8.295 5677	8.301 9163	8.308 1734	8.314 3416	8.320 4233	6
55	8.289 2330	8.295 6742	8.302 0213	8.308 2769	8.314 4436	8.320 5240	5
56	8.289 3411	8.295 7808	8.302 1263	8.308 3804	8.314 5457	8.320 6246	4
57	8.289 4492	8.295 8873	8.302 2313	8.308 4839	8.314 6477	8.320 7252	3
58	8.289 5573	8.295 9938	8.302 3362	8.308 5873	8.314 7497	8.320 8258	2
59	8.289 6654	8.296 1003	8.302 4411	8.308 6907	8.314 8516	8.320 9263	1
60	8.289 7734	8.296 2067	8.302 5460	8.308 7941	8.314 9536	8.321 0269	0
″	53′	52′	51′	50′	49′	48′	″

″	6′	7′	8′	9′	10′	11′	″
0	8.283 3234	8.289 8559	8.296 2917	8.302 6335	8.308 8842	8.315 0462	60
1	8.283 4331	8.289 9640	8.296 3981	8.302 7385	8.308 9876	8.315 1482	59
2	8.283 5428	8.290 0720	8.296 5046	8.302 8433	8.309 0910	8.315 2501	58
3	8.283 6524	8.290 1800	8.296 6110	8.302 9482	8.309 1944	8.315 3520	57
4	8.283 7620	8.290 2879	8.296 7174	8.303 0531	8.309 2977	8.315 4539	56
5	8.283 8716	8.290 3959	8.296 8237	8.303 1579	8.309 4010	8.315 5558	55
6	8.283 9811	8.290 5038	8.296 9300	8.303 2627	8.309 5043	8.315 6576	54
7	8.284 0906	8.290 6117	8.297 0363	8.303 3674	8.309 6076	8.315 7595	53
8	8.284 2001	8.290 7195	8.297 1426	8.303 4722	8.309 7109	8.315 8613	52
9	8.284 3096	8.290 8274	8.297 2489	8.303 5769	8.309 8141	8.315 9630	51
10	8.284 4190	8.290 9352	8.297 3551	8.303 6816	8.309 9173	8.316 0648	50
11	8.284 5284	8.291 0430	8.297 4613	8.303 7862	8.310 0205	8.316 1665	49
12	8.284 6378	8.291 1507	8.297 5675	8.303 8909	8.310 1236	8.316 2682	48
13	8.284 7471	8.291 2584	8.297 6736	8.303 9955	8.310 2267	8.316 3699	47
14	8.284 8565	8.291 3661	8.297 7797	8.304 1001	8.310 3298	8.316 4715	46
15	8.284 9658	8.291 4738	8.297 8858	8.304 2046	8.310 4329	8.316 5732	45
16	8.285 0750	8.291 5815	8.297 9919	8.304 3092	8.310 5360	8.316 6748	44
17	8.285 1843	8.291 6891	8.298 0980	8.304 4137	8.310 6390	8.316 7764	43
18	8.285 2935	8.291 7967	8.298 2040	8.304 5182	8.310 7420	8.316 8779	42
19	8.285 4027	8.291 9042	8.298 3100	8.304 6226	8.310 8450	8.316 9795	41
20	8.285 5118	8.292 0118	8.298 4159	8.304 7271	8.310 9479	8.317 0810	40
21	8.285 6210	8.292 1193	8.298 5219	8.304 8315	8.311 0508	8.317 1825	39
22	8.285 7301	8.292 2268	8.298 6278	8.304 9359	8.311 1538	8.317 2839	38
23	8.285 8392	8.292 3342	8.298 7337	8.305 0403	8.311 2566	8.317 3854	37
24	8.285 9482	8.292 4417	8.298 8395	8.305 1446	8.311 3595	8.317 4868	36
25	8.286 0572	8.292 5491	8.298 9454	8.305 2489	8.311 4623	8.317 5882	35
26	8.286 1662	8.292 6565	8.299 0512	8.305 3532	8.311 5651	8.317 6895	34
27	8.286 2752	8.292 7638	8.299 1570	8.305 4575	8.311 6679	8.317 7909	33
28	8.286 3841	8.292 8711	8.299 2627	8.305 5617	8.311 7707	8.317 8922	32
29	8.286 4931	8.292 9784	8.299 3685	8.305 6659	8.311 8734	8.317 9935	31
30	8.286 6019	8.293 0857	8.299 4742	8.305 7701	8.311 9761	8.318 0948	30
31	8.286 7108	8.293 1930	8.299 5799	8.305 8743	8.312 0788	8.318 1960	29
32	8.286 8196	8.293 3002	8.299 6855	8.305 9784	8.312 1815	8.318 2973	28
33	8.286 9284	8.293 4074	8.299 7911	8.306 0825	8.312 2841	8.318 3985	27
34	8.287 0372	8.293 5145	8.299 8967	8.306 1866	8.312 3867	8.318 4997	26
35	8.287 1460	8.293 6217	8.300 0023	8.306 2907	8.312 4893	8.318 6008	25
36	8.287 2547	8.293 7288	8.300 1079	8.306 3947	8.312 5919	8.318 7019	24
37	8.287 3634	8.293 8359	8.300 2134	8.306 4987	8.312 6944	8.318 8031	23
38	8.287 4720	8.293 9429	8.300 3189	8.306 6027	8.312 7969	8.318 9041	22
39	8.287 5807	8.294 0500	8.300 4244	8.306 7067	8.312 8994	8.319 0052	21
40	8.287 6893	8.294 1570	8.300 5298	8.306 8106	8.313 0019	8.319 1062	20
41	8.287 7979	8.294 2640	8.300 6353	8.306 9145	8.313 1043	8.319 2073	19
42	8.287 9065	8.294 3709	8.300 7407	8.307 0184	8.313 2068	8.319 3083	18
43	8.288 0150	8.294 4779	8.300 8460	8.307 1223	8.313 3092	8.319 4092	17
44	8.288 1235	8.294 5848	8.300 9514	8.307 2261	8.313 4115	8.319 5102	16
45	8.288 2320	8.294 6916	8.301 0567	8.307 3299	8.313 5139	8.319 6111	15
46	8.288 3404	8.294 7985	8.301 1620	8.307 4337	8.313 6162	8.319 7120	14
47	8.288 4488	8.294 9053	8.301 2673	8.307 5375	8.313 7185	8.319 8129	13
48	8.288 5572	8.295 0121	8.301 3725	8.307 6412	8.313 8208	8.319 9137	12
49	8.288 6656	8.295 1189	8.301 4778	8.307 7449	8.313 9230	8.320 0145	11
50	8.288 7740	8.295 2256	8.301 5830	8.307 8486	8.314 0253	8.320 1154	10
51	8.288 8823	8.295 3324	8.301 6881	8.307 9523	8.314 1275	8.320 2161	9
52	8.288 9906	8.295 4391	8.301 7933	8.308 0559	8.314 2296	8.320 3169	8
53	8.289 0988	8.295 5457	8.301 8984	8.308 1596	8.314 3318	8.320 4176	7
54	8.289 2071	8.295 6524	8.302 0035	8.308 2631	8.314 4339	8.320 5183	6
55	8.289 3153	8.295 7590	8.302 1086	8.308 3667	8.314 5360	8.320 6190	5
56	8.289 4235	8.295 8656	8.302 2136	8.308 4703	8.314 6381	8.320 7197	4
57	8.289 5316	8.295 9721	8.302 3186	8.308 5738	8.314 7402	8.320 8203	3
58	8.289 6397	8.296 0787	8.302 4236	8.308 6773	8.314 8422	8.320 9210	2
59	8.289 7478	8.296 1852	8.302 5286	8.308 7807	8.314 9442	8.321 0215	1
60	8.289 8559	8.296 2917	8.302 6335	8.308 8842	8.315 0462	8.321 1221	0
″	53′	52′	51′	50′	49′	48′	″

sin 1°

″	12′	13′	14′	15′	16′	17′	″
0	8.321 0269	8.327 0163	8.332 9243	8.338 7529	8.344 5043	8.350 1805	60
1	8.321 1274	8.327 1155	8.333 0221	8.338 8494	8.344 5995	8.350 2745	59
2	8.321 2278	8.327 2146	8.333 1199	8.338 9459	8.344 6947	8.350 3685	58
3	8.321 3283	8.327 3137	8.333 2176	8.339 0423	8.344 7899	8.350 4624	57
4	8.321 4287	8.327 4127	8.333 3153	8.339 1387	8.344 8851	8.350 5563	56
5	8.321 5292	8.327 5118	8.333 4130	8.339 2351	8.344 9802	8.350 6502	55
6	8.321 6295	8.327 6108	8.333 5107	8.339 3315	8.345 0753	8.350 7441	54
7	8.321 7299	8.327 7098	8.333 6084	8.339 4279	8.345 1704	8.350 8379	53
8	8.321 8303	8.327 8087	8.333 7060	8.339 5242	8.345 2655	8.350 9318	52
9	8.321 9306	8.327 9077	8.333 8036	8.339 6205	8.345 3605	8.351 0256	51
10	8.322 0309	8.328 0066	8.333 9012	8.339 7168	8.345 4555	8.351 1194	50
11	8.322 1311	8.328 1055	8.333 9988	8.339 8131	8.345 5505	8.351 2132	49
12	8.322 2314	8.328 2044	8.334 0963	8.339 9093	8.345 6455	8.351 3069	48
13	8.322 3316	8.328 3032	8.334 1938	8.340 0055	8.345 7405	8.351 4006	47
14	8.322 4318	8.328 4021	8.334 2913	8.340 1018	8.345 8354	8.351 4944	46
15	8.322 5320	8.328 5009	8.334 3888	8.340 1979	8.345 9304	8.351 5881	45
16	8.322 6322	8.328 5997	8.334 4863	8.340 2941	8.346 0253	8.351 6817	44
17	8.322 7323	8.328 6984	8.334 5837	8.340 3902	8.346 1201	8.351 7754	43
18	8.322 8324	8.328 7972	8.334 6811	8.340 4864	8.346 2150	8.351 8690	42
19	8.322 9325	8.328 8959	8.334 7785	8.340 5825	8.346 3098	8.351 9626	41
20	8.323 0326	8.328 9946	8.334 8759	8.340 6785	8.346 4047	8.352 0562	40
21	8.323 1326	8.329 0933	8.334 9732	8.340 7746	8.346 4995	8.352 1498	39
22	8.323 2326	8.329 1919	8.335 0706	8.340 8706	8.346 5942	8.352 2433	38
23	8.323 3326	8.329 2906	8.335 1679	8.340 9666	8.346 6890	8.352 3369	37
24	8.323 4326	8.329 3892	8.335 2651	8.341 0626	8.346 7837	8.352 4304	36
25	8.323 5325	8.329 4878	8.335 3624	8.341 1586	8.346 8784	8.352 5239	35
26	8.323 6325	8.329 5863	8.335 4597	8.341 2546	8.346 9731	8.352 6173	34
27	8.323 7324	8.329 6849	8.335 5569	8.341 3505	8.347 0678	8.352 7108	33
28	8.323 8322	8.329 7834	8.335 6541	8.341 4464	8.347 1625	8.352 8042	32
29	8.323 9321	8.329 8819	8.335 7512	8.341 5423	8.347 2571	8.352 8976	31
30	8.324 0319	8.329 9804	8.335 8484	8.341 6382	8.347 3517	8.352 9910	30
31	8.324 1317	8.330 0788	8.335 9455	8.341 7340	8.347 4463	8.353 0844	29
32	8.324 2315	8.330 1773	8.336 0426	8.341 8298	8.347 5409	8.353 1778	28
33	8.324 3313	8.330 2757	8.336 1397	8.341 9256	8.347 6354	8.353 2711	27
34	8.324 4310	8.330 3740	8.336 2368	8.342 0214	8.347 7300	8.353 3644	26
35	8.324 5308	8.330 4724	8.336 3338	8.342 1172	8.347 8245	8.353 4577	25
36	8.324 6305	8.330 5708	8.336 4309	8.342 2129	8.347 9189	8.353 5510	24
37	8.324 7301	8.330 6691	8.336 5279	8.342 3086	8.348 0134	8.353 6442	23
38	8.324 8298	8.330 7674	8.336 6248	8.342 4043	8.348 1079	8.353 7374	22
39	8.324 9294	8.330 8656	8.336 7218	8.342 5000	8.348 2023	8.353 8306	21
40	8.325 0290	8.330 9639	8.336 8187	8.342 5957	8.348 2967	8.353 9238	20
41	8.325 1286	8.331 0621	8.336 9156	8.342 6913	8.348 3911	8.354 0170	19
42	8.325 2282	8.331 1603	8.337 0125	8.342 7869	8.348 4854	8.354 1102	18
43	8.325 3277	8.331 2585	8.337 1094	8.342 8825	8.348 5798	8.354 2033	17
44	8.325 4272	8.331 3567	8.337 2063	8.342 9781	8.348 6741	8.354 2964	16
45	8.325 5267	8.331 4548	8.337 3031	8.343 0736	8.348 7684	8.354 3895	15
46	8.325 6262	8.331 5529	8.337 3999	8.343 1691	8.348 8627	8.354 4826	14
47	8.325 7256	8.331 6510	8.337 4967	8.343 2646	8.348 9570	8.354 5756	13
48	8.325 8250	8.331 7491	8.337 5934	8.343 3601	8.349 0512	8.354 6686	12
49	8.325 9244	8.331 8472	8.337 6902	8.343 4556	8.349 1454	8.354 7617	11
50	8.326 0238	8.331 9452	8.337 7869	8.343 5510	8.349 2396	8.354 8546	10
51	8.326 1232	8.332 0432	8.337 8836	8.343 6465	8.349 3338	8.354 9476	9
52	8.326 2225	8.332 1412	8.337 9803	8.343 7419	8.349 4280	8.355 0406	8
53	8.326 3218	8.332 2392	8.338 0769	8.343 8372	8.349 5221	8.355 1335	7
54	8.326 4211	8.332 3371	8.338 1736	8.343 9326	8.349 6162	8.355 2264	6
55	8.326 5204	8.332 4350	8.338 2702	8.344 0279	8.349 7103	8.355 3193	5
56	8.326 6196	8.332 5329	8.338 3668	8.344 1233	8.349 8044	8.355 4122	4
57	8.326 7188	8.332 6308	8.338 4633	8.344 2186	8.349 8985	8.355 5050	3
58	8.326 8180	8.332 7287	8.338 5599	8.344 3138	8.349 9925	8.355 5979	2
59	8.326 9172	8.332 8265	8.338 6564	8.344 4091	8.350 0865	8.355 6907	1
60	8.327 0163	8.332 9243	8.338 7529	8.344 5043	8.350 1805	8.355 7835	0
″	47′	46′	45′	44′	43′	42′	″

cos 88°

″	12′	13′	14′	15′	16′	17′	″
0	8.321 1221	8.327 1143	8.333 0249	8.338 8563	8.344 6105	8.350 2895	60
1	8.321 2227	8.327 2134	8.333 1228	8.338 9528	8.344 7057	8.350 3835	59
2	8.321 3232	8.327 3126	8.333 2206	8.339 0493	8.344 8010	8.350 4775	58
3	8.321 4237	8.327 4117	8.333 3184	8.339 1458	8.344 8962	8.350 5715	57
4	8.321 5242	8.327 5108	8.333 4161	8.339 2423	8.344 9914	8.350 6655	56
5	8.321 6246	8.327 6099	8.333 5139	8.339 3387	8.345 0866	8.350 7594	55
6	8.321 7251	8.327 7090	8.333 6116	8.339 4351	8.345 1817	8.350 8533	54
7	8.321 8255	8.327 8080	8.333 7093	8.339 5316	8.345 2769	8.350 9472	53
8	8.321 9259	8.327 9070	8.333 8070	8.339 6279	8.345 3720	8.351 0411	52
9	8.322 0262	8.328 0060	8.333 9046	8.339 7243	8.345 4671	8.351 1350	51
10	8.322 1266	8.328 1050	8.334 0023	8.339 8206	8.345 5621	8.351 2288	50
11	8.322 2269	8.328 2039	8.334 0999	8.339 9169	8.345 6572	8.351 3226	49
12	8.322 3272	8.328 3028	8.334 1975	8.340 0132	8.345 7522	8.351 4164	48
13	8.322 4274	8.328 4017	8.334 2950	8.340 1095	8.345 8472	8.351 5102	47
14	8.322 5277	8.328 5006	8.334 3926	8.340 2058	8.345 9422	8.351 6040	46
15	8.322 6279	8.328 5995	8.334 4901	8.340 3020	8.346 0372	8.351 6977	45
16	8.322 7281	8.328 6983	8.334 5876	8.340 3982	8.346 1321	8.351 7914	44
17	8.322 8283	8.328 7971	8.334 6851	8.340 4944	8.346 2271	8.351 8851	43
18	8.322 9285	8.328 8959	8.334 7826	8.340 5906	8.346 3220	8.351 9788	42
19	8.323 0286	8.328 9947	8.334 8800	8.340 6867	8.346 4169	8.352 0725	41
20	8.323 1287	8.329 0934	8.334 9774	8.340 7828	8.346 5117	8.352 1661	40
21	8.323 2288	8.329 1921	8.335 0748	8.340 8789	8.346 6066	8.352 2597	39
22	8.323 3288	8.329 2908	8.335 1722	8.340 9750	8.346 7014	8.352 3533	38
23	8.323 4289	8.329 3895	8.335 2695	8.341 0711	8.346 7962	8.352 4469	37
24	8.323 5289	8.329 4882	8.335 3669	8.341 1671	8.346 8910	8.352 5405	36
25	8.323 6289	8.329 5868	8.335 4642	8.341 2631	8.346 9857	8.352 6340	35
26	8.323 7289	8.329 6854	8.335 5615	8.341 3591	8.347 0805	8.352 7275	34
27	8.323 8288	8.329 7840	8.335 6587	8.341 4551	8.347 1752	8.352 8210	33
28	8.323 9287	8.329 8826	8.335 7560	8.341 5511	8.347 2699	8.352 9145	32
29	8.324 0286	8.329 9811	8.335 8532	8.341 6470	8.347 3646	8.353 0080	31
30	8.324 1285	8.330 0796	8.335 9504	8.341 7429	8.347 4592	8.353 1014	30
31	8.324 2284	8.330 1781	8.336 0476	8.341 8388	8.347 5539	8.353 1948	29
32	8.324 3282	8.330 2766	8.336 1447	8.341 9347	8.347 6485	8.353 2882	28
33	8.324 4280	8.330 3751	8.336 2419	8.342 0305	8.347 7431	8.353 3816	27
34	8.324 5278	8.330 4735	8.336 3390	8.342 1263	8.347 8377	8.353 4750	26
35	8.324 6276	8.330 5719	8.336 4361	8.342 2221	8.347 9322	8.353 5683	25
36	8.324 7273	8.330 6703	8.336 5331	8.342 3179	8.348 0268	8.353 6616	24
37	8.324 8270	8.330 7687	8.336 6302	8.342 4137	8.348 1213	8.353 7549	23
38	8.324 9267	8.330 8670	8.336 7272	8.342 5094	8.348 2158	8.353 8482	22
39	8.325 0264	8.330 9653	8.336 8242	8.342 6052	8.348 3103	8.353 9414	21
40	8.325 1260	8.331 0636	8.336 9212	8.342 7009	8.348 4047	8.354 0347	20
41	8.325 2257	8.331 1619	8.337 0181	8.342 7965	8.348 4991	8.354 1279	19
42	8.325 3253	8.331 2601	8.337 1151	8.342 8922	8.348 5936	8.354 2211	18
43	8.325 4249	8.331 3584	8.337 2120	8.342 9878	8.348 6879	8.354 3143	17
44	8.325 5244	8.331 4566	8.337 3089	8.343 0835	8.348 7823	8.354 4074	16
45	8.325 6240	8.331 5548	8.337 4058	8.343 1791	8.348 8767	8.354 5006	15
46	8.325 7235	8.331 6529	8.337 5026	8.343 2746	8.348 9710	8.354 5937	14
47	8.325 8230	8.331 7511	8.337 5994	8.343 3702	8.349 0653	8.354 6868	13
48	8.325 9224	8.331 8492	8.337 6963	8.343 4657	8.349 1596	8.354 7799	12
49	8.326 0219	8.331 9473	8.337 7930	8.343 5612	8.349 2539	8.354 8729	11
50	8.326 1213	8.332 0454	8.337 8898	8.343 6567	8.349 3481	8.354 9660	10
51	8.326 2207	8.332 1434	8.337 9866	8.343 7522	8.349 4423	8.355 0590	9
52	8.326 3201	8.332 2415	8.338 0833	8.343 8476	8.349 5365	8.355 1520	8
53	8.326 4194	8.332 3395	8.338 1800	8.343 9431	8.349 6307	8.355 2450	7
54	8.326 5188	8.332 4375	8.338 2767	8.344 0385	8.349 7249	8.355 3379	6
55	8.326 6181	8.332 5354	8.338 3733	8.344 1339	8.349 8191	8.355 4309	5
56	8.326 7173	8.332 6334	8.338 4700	8.344 2292	8.349 9132	8.355 5238	4
57	8.326 8166	8.332 7313	8.338 5666	8.344 3246	8.350 0073	8.355 6167	3
58	8.326 9158	8.332 8292	8.338 6632	8.344 4199	8.350 1014	8.355 7096	2
59	8.327 0151	8.332 9271	8.338 7597	8.344 5152	8.350 1954	8.355 8024	1
60	8.327 1143	8.333 0249	8.338 8563	8.344 6105	8.350 2895	8.355 8953	0
″	47′	46′	45′	44′	43′	42′	″

sin 1°

″	18′	19′	20′	21′	22′	23′	″
0	8.355 7835	8.361 3150	8.366 7769	8.372 1710	8.377 4988	8.382 7620	60
1	8.355 8762	8.361 4066	8.366 8674	8.372 2603	8.377 5870	8.382 8492	59
2	8.355 9690	8.361 4982	8.366 9578	8.372 3496	8.377 6753	8.382 9364	58
3	8.356 0617	8.361 5897	8.367 0482	8.372 4389	8.377 7635	8.383 0235	57
4	8.356 1544	8.361 6813	8.367 1386	8.372 5282	8.377 8517	8.383 1106	56
5	8.356 2471	8.361 7728	8.367 2290	8.372 6174	8.377 9398	8.383 1978	55
6	8.356 3398	8.361 8643	8.367 3193	8.372 7067	8.378 0280	8.383 2848	54
7	8.356 4324	8.361 9558	8.367 4097	8.372 7959	8.378 1161	8.383 3719	53
8	8.356 5251	8.362 0472	8.367 5000	8.372 8851	8.378 2042	8.383 4590	52
9	8.356 6177	8.362 1387	8.367 5903	8.372 9743	8.378 2924	8.383 5460	51
10	8.356 7103	8.362 2301	8.367 6806	8.373 0635	8.378 3804	8.383 6330	50
11	8.356 8029	8.362 3215	8.367 7708	8.373 1526	8.378 4685	8.383 7201	49
12	8.356 8954	8.362 4129	8.367 8611	8.373 2418	8.378 5566	8.383 8070	48
13	8.356 9880	8.362 5042	8.367 9513	8.373 3309	8.378 6446	8.383 8940	47
14	8.357 0805	8.362 5956	8.368 0415	8.373 4200	8.378 7326	8.383 9810	46
15	8.357 1730	8.362 6869	8.368 1317	8.373 5091	8.378 8206	8.384 0679	45
16	8.357 2654	8.362 7782	8.368 2219	8.373 5981	8.378 9086	8.384 1548	44
17	8.357 3579	8.362 8695	8.368 3120	8.373 6872	8.378 9965	8.384 2417	43
18	8.357 4503	8.362 9608	8.368 4022	8.373 7762	8.379 0845	8.384 3286	42
19	8.357 5427	8.363 0520	8.368 4923	8.373 8652	8.379 1724	8.384 4155	41
20	8.357 6351	8.363 1433	8.368 5824	8.373 9542	8.379 2603	8.384 5023	40
21	8.357 7275	8.363 2345	8.368 6725	8.374 0431	8.379 3482	8.384 5892	39
22	8.357 8199	8.363 3257	8.368 7625	8.374 1321	8.379 4361	8.384 6760	38
23	8.357 9122	8.363 4169	8.368 8526	8.374 2210	8.379 5239	8.384 7628	37
24	8.358 0045	8.363 5080	8.368 9426	8.374 3099	8.379 6117	8.384 8496	36
25	8.358 0968	8.363 5991	8.369 0326	8.374 3988	8.379 6996	8.384 9363	35
26	8.358 1891	8.363 6903	8.369 1226	8.374 4877	8.379 7874	8.385 0231	34
27	8.358 2814	8.363 7814	8.369 2125	8.374 5766	8.379 8751	8.385 1098	33
28	8.358 3736	8.363 8724	8.369 3025	8.374 6654	8.379 9629	8.385 1965	32
29	8.358 4658	8.363 9635	8.369 3924	8.374 7542	8.380 0507	8.385 2832	31
30	8.358 5580	8.364 0545	8.369 4823	8.374 8430	8.380 1384	8.385 3699	30
31	8.358 6502	8.364 1456	8.369 5722	8.374 9318	8.380 2261	8.385 4565	29
32	8.358 7424	8.364 2366	8.369 6621	8.375 0206	8.380 3138	8.385 5432	28
33	8.358 8345	8.364 3275	8.369 7519	8.375 1094	8.380 4015	8.385 6298	27
34	8.358 9266	8.364 4185	8.369 8418	8.375 1981	8.380 4891	8.385 7164	26
35	8.359 0187	8.364 5095	8.369 9316	8.375 2868	8.380 5768	8.385 8030	25
36	8.359 1108	8.364 6004	8.370 0214	8.375 3755	8.380 6644	8.385 8896	24
37	8.359 2029	8.364 6913	8.370 1111	8.375 4642	8.380 7520	8.385 9761	23
38	8.359 2949	8.364 7822	8.370 2009	8.375 5528	8.380 8396	8.386 0627	22
39	8.359 3870	8.364 8730	8.370 2907	8.375 6415	8.380 9271	8.386 1492	21
40	8.359 4790	8.364 9639	8.370 3804	8.375 7301	8.381 0147	8.386 2357	20
41	8.359 5709	8.365 0547	8.370 4701	8.375 8187	8.381 1021	8.386 3222	19
42	8.359 6629	8.365 1455	8.370 5598	8.375 9073	8.381 1897	8.386 4087	18
43	8.359 7549	8.365 2363	8.370 6494	8.375 9959	8.381 2772	8.386 4951	17
44	8.359 8468	8.365 3271	8.370 7391	8.376 0844	8.381 3647	8.386 5816	16
45	8.359 9387	8.365 4179	8.370 8287	8.376 1729	8.381 4522	8.386 6680	15
46	8.360 0306	8.365 5086	8.370 9183	8.376 2615	8.381 5396	8.386 7544	14
47	8.360 1225	8.365 5993	8.371 0079	8.376 3500	8.381 6271	8.386 8408	13
48	8.360 2143	8.365 6900	8.371 0975	8.376 4384	8.381 7145	8.386 9271	12
49	8.360 3061	8.365 7807	8.371 1870	8.376 5269	8.381 8019	8.387 0135	11
50	8.360 3979	8.365 8713	8.371 2766	8.376 6153	8.381 8892	8.387 0998	10
51	8.360 4897	8.365 9620	8.371 3661	8.376 7038	8.381 9766	8.387 1861	9
52	8.360 5815	8.366 0526	8.371 4556	8.376 7922	8.382 0639	8.387 2724	8
53	8.360 6733	8.366 1432	8.371 5451	8.376 8806	8.382 1513	8.387 3587	7
54	8.360 7650	8.366 2338	8.371 6346	8.376 9689	8.382 2386	8.387 4450	6
55	8.360 8567	8.366 3244	8.371 7240	8.377 0573	8.382 3258	8.387 5312	5
56	8.360 9484	8.366 4149	8.371 8134	8.377 1456	8.382 4131	8.387 6174	4
57	8.361 0401	8.366 5054	8.371 9028	8.377 2339	8.382 5004	8.387 7037	3
58	8.361 1317	8.366 5959	8.371 9922	8.377 3222	8.382 5876	8.387 7898	2
59	8.361 2234	8.366 6864	8.372 0816	8.377 4105	8.382 6748	8.387 8760	1
60	8.361 3150	8.366 7769	8.372 1710	8.377 4988	8.382 7620	8.387 9622	0
″	41′	40′	39′	38′	37′	36′	″

cos 88°

tang 1°

″	18′	19′	20′	21′	22′	23′	″
0	8.355 8953	8.361 4297	8.366 8945	8.372 2915	8.377 6223	8.382 8886	60
1	8.355 9881	8.361 5213	8.366 9850	8.372 3809	8.377 7106	8.382 9758	59
2	8.356 0809	8.361 6129	8.367 0755	8.372 4703	8.377 7989	8.383 0631	58
3	8.356 1737	8.361 7045	8.367 1660	8.372 5596	8.377 8872	8.383 1503	57
4	8.356 2664	8.361 7961	8.367 2564	8.372 6489	8.377 9754	8.383 2374	56
5	8.356 3592	8.361 8877	8.367 3468	8.372 7383	8.378 0636	8.383 3246	55
6	8.356 4519	8.361 9793	8.367 4372	8.372 8275	8.378 1519	8.383 4117	54
7	8.356 5446	8.362 0708	8.367 5276	8.372 9168	8.378 2400	8.383 4989	53
8	8.356 6373	8.362 1623	8.367 6180	8.373 0061	8.378 3282	8.383 5860	52
9	8.356 7299	8.362 2538	8.367 7083	8.373 0953	8.378 4164	8.383 6731	51
10	8.356 8226	8.362 3453	8.367 7987	8.373 1845	8.378 5045	8.383 7601	50
11	8.356 9152	8.362 4367	8.367 8890	8.373 2737	8.378 5926	8.383 8472	49
12	8.357 0078	8.362 5281	8.367 9793	8.373 3629	8.378 6807	8.383 9342	48
13	8.357 1004	8.362 6196	8.368 0696	8.373 4521	8.378 7688	8.384 0213	47
14	8.357 1929	8.362 7110	8.368 1598	8.373 5412	8.378 8569	8.384 1083	46
15	8.357 2855	8.362 8023	8.368 2501	8.373 6304	8.378 9449	8.384 1953	45
16	8.357 3780	8.362 8937	8.368 3403	8.373 7195	8.379 0329	8.384 2822	44
17	8.357 4705	8.362 9850	8.368 4305	8.373 8086	8.379 1209	8.384 3692	43
18	8.357 5630	8.363 0763	8.368 5207	8.373 8976	8.379 2089	8.384 4561	42
19	8.357 6555	8.363 1676	8.368 6108	8.373 9867	8.379 2969	8.384 5430	41
20	8.357 7479	8.363 2589	8.368 7010	8.374 0757	8.379 3849	8.384 6299	40
21	8.357 8403	8.363 3502	8.368 7911	8.374 1647	8.379 4728	8.384 7168	39
22	8.357 9327	8.363 4414	8.368 8812	8.374 2538	8.379 5607	8.384 8037	38
23	8.358 0251	8.363 5327	8.368 9713	8.374 3427	8.379 6486	8.384 8905	37
24	8.358 1175	8.363 6239	8.369 0614	8.374 4317	8.379 7365	8.384 9774	36
25	8.358 2098	8.363 7150	8.369 1514	8.374 5206	8.379 8244	8.385 0642	35
26	8.358 3022	8.363 8062	8.369 2414	8.374 6096	8.379 9122	8.385 1510	34
27	8.358 3945	8.363 8974	8.369 3315	8.374 6985	8.380 0001	8.385 2378	33
28	8.358 4868	8.363 9885	8.369 4215	8.374 7874	8.380 0879	8.385 3245	32
29	8.358 5790	8.364 0796	8.369 5114	8.374 8762	8.380 1757	8.385 4113	31
30	8.358 6713	8.364 1707	8.369 6014	8.374 9651	8.380 2634	8.385 4980	30
31	8.358 7635	8.364 2617	8.369 6913	8.375 0539	8.380 3512	8.385 5847	29
32	8.358 8557	8.364 3528	8.369 7812	8.375 1428	8.380 4390	8.385 6714	28
33	8.358 9479	8.364 4438	8.369 8712	8.375 2316	8.380 5267	8.385 7581	27
34	8.359 0401	8.364 5348	8.369 9610	8.375 3203	8.380 6144	8.385 8448	26
35	8.359 1322	8.364 6258	8.370 0509	8.375 4091	8.380 7021	8.385 9314	25
36	8.359 2243	8.364 7168	8.370 1407	8.375 4979	8.380 7898	8.386 0180	24
37	8.359 3165	8.364 8078	8.370 2306	8.375 5866	8.380 8774	8.386 1046	23
38	8.359 4086	8.364 8987	8.370 3204	8.375 6753	8.380 9650	8.386 1912	22
39	8.359 5006	8.364 9896	8.370 4102	8.375 7640	8.381 0527	8.386 2778	21
40	8.359 5927	8.365 0805	8.370 4999	8.375 8527	8.381 1403	8.386 3643	20
41	8.359 6847	8.365 1714	8.370 5897	8.375 9413	8.381 2278	8.386 4509	19
42	8.359 7767	8.365 2623	8.370 6794	8.376 0299	8.381 3154	8.386 5374	18
43	8.359 8687	8.365 3531	8.370 7692	8.376 1186	8.381 4030	8.386 6239	17
44	8.359 9607	8.365 4439	8.370 8589	8.376 2072	8.381 4905	8.386 7104	16
45	8.360 0527	8.365 5347	8.370 9485	8.376 2958	8.381 5780	8.386 7969	15
46	8.360 1446	8.365 6255	8.371 0382	8.376 3843	8.381 6655	8.386 8833	14
47	8.360 2365	8.365 7163	8.371 1278	8.376 4729	8.381 7530	8.386 9698	13
48	8.360 3284	8.365 8070	8.371 2175	8.376 5614	8.381 8404	8.387 0562	12
49	8.360 4203	8.365 8978	8.371 3071	8.376 6499	8.381 9279	8.387 1426	11
50	8.360 5121	8.365 9885	8.371 3967	8.376 7384	8.382 0153	8.387 2290	10
51	8.360 6040	8.366 0792	8.371 4862	8.376 8269	8.382 1027	8.387 3153	9
52	8.360 6958	8.366 1698	8.371 5758	8.376 9153	8.382 1901	8.387 4017	8
53	8.360 7876	8.366 2605	8.371 6653	8.377 0038	8.382 2775	8.387 4880	7
54	8.360 8794	8.366 3511	8.371 7548	8.377 0922	8.382 3648	8.387 5743	6
55	8.360 9711	8.366 4417	8.371 8443	8.377 1806	8.382 4522	8.387 6606	5
56	8.361 0629	8.366 5323	8.371 9338	8.377 2690	8.382 5395	8.387 7469	4
57	8.361 1546	8.366 6229	8.372 0232	8.377 3574	8.382 6268	8.387 8332	3
58	8.361 2463	8.366 7135	8.372 1127	8.377 4457	8.382 7141	8.387 9194	2
59	8.361 3380	8.366 8040	8.372 2021	8.377 5340	8.382 8014	8.388 0056	1
60	8.361 4297	8.366 8945	8.372 2915	8.377 6223	8.382 8886	8.388 0918	0
″	41′	40′	39′	38′	37′	36′	″

cotg 88°

sin 1°

″	24′	25′	26′	27′	28′	29′	″
0	8.387 9622	8.393 1008	8.398 1793	8.403 1990	8.408 1614	8.413 0676	60
1	8.388 0483	8.393 1859	8.398 2634	8.403 2822	8.408 2436	8.413 1489	59
2	8.388 1345	8.393 2710	8.398 3475	8.403 3653	8.408 3258	8.413 2302	58
3	8.388 2206	8.393 3561	8.398 4316	8.403 4485	8.408 4080	8.413 3115	57
4	8.388 3067	8.393 4412	8.398 5157	8.403 5316	8.408 4902	8.413 3927	56
5	8.388 3927	8.393 5263	8.398 5998	8.403 6147	8.408 5723	8.413 4740	55
6	8.388 4788	8.393 6113	8.398 6839	8.403 6978	8.408 6545	8.413 5552	54
7	8.388 5648	8.393 6964	8.398 7679	8.403 7809	8.408 7366	8.413 6364	53
8	8.388 6509	8.393 7814	8.398 8519	8.403 8639	8.408 8187	8.413 7176	52
9	8.388 7369	8.393 8664	8.398 9359	8.403 9470	8.408 9008	8.413 7988	51
10	8.388 8229	8.393 9513	8.399 0199	8.404 0300	8.408 9829	8.413 8800	50
11	8.388 9088	8.394 0363	8.399 1039	8.404 1130	8.409 0650	8.413 9611	49
12	8.388 9948	8.394 1213	8.399 1879	8.404 1960	8.409 1471	8.414 0422	48
13	8.389 0807	8.394 2062	8.399 2718	8.404 2790	8.409 2291	8.414 1234	47
14	8.389 1666	8.394 2911	8.399 3557	8.404 3620	8.409 3111	8.414 2045	46
15	8.389 2526	8.394 3760	8.399 4397	8.404 4449	8.409 3931	8.414 2856	45
16	8.389 3384	8.394 4609	8.399 5236	8.404 5279	8.409 4751	8.414 3666	44
17	8.389 4243	8.394 5457	8.399 6074	8.404 6108	8.409 5571	8.414 4477	43
18	8.389 5102	8.394 6306	8.399 6913	8.404 6937	8.409 6391	8.414 5287	42
19	8.389 5960	8.394 7154	8.399 7751	8.404 7766	8.409 7210	8.414 6098	41
20	8.389 6818	8.394 8002	8.399 8590	8.404 8594	8.409 8029	8.414 6908	40
21	8.389 7676	8.394 8850	8.399 9428	8.404 9423	8.409 8849	8.414 7718	39
22	8.389 8534	8.394 9698	8.400 0266	8.405 0251	8.409 9668	8.414 8528	38
23	8.389 9392	8.395 0546	8.400 1104	8.405 1080	8.410 0486	8.414 9337	37
24	8.390 0249	8.395 1393	8.400 1941	8.405 1908	8.410 1305	8.415 0147	36
25	8.390 1107	8.395 2240	8.400 2779	8.405 2736	8.410 2124	8.415 0956	35
26	8.390 1964	8.395 3088	8.400 3616	8.405 3563	8.410 2942	8.415 1765	34
27	8.390 2821	8.395 3935	8.400 4453	8.405 4391	8.410 3760	8.415 2575	33
28	8.390 3678	8.395 4781	8.400 5290	8.405 5218	8.410 4578	8.415 3383	32
29	8.390 4534	8.395 5628	8.400 6127	8.405 6046	8.410 5396	8.415 4192	31
30	8.390 5391	8.395 6475	8.400 6964	8.405 6873	8.410 6214	8.415 5001	30
31	8.390 6247	8.395 7321	8.400 7801	8.405 7700	8.410 7032	8.415 5809	29
32	8.390 7103	8.395 8167	8.400 8637	8.405 8527	8.410 7849	8.415 6618	28
33	8.390 7959	8.395 9013	8.400 9473	8.405 9353	8.410 8667	8.415 7426	27
34	8.390 8815	8.395 9859	8.401 0309	8.406 0180	8.410 9484	8.415 8234	26
35	8.390 9671	8.396 0705	8.401 1145	8.406 1006	8.411 0301	8.415 9042	25
36	8.391 0526	8.396 1550	8.401 1981	8.406 1832	8.411 1118	8.415 9850	24
37	8.391 1382	8.396 2395	8.401 2816	8.406 2658	8.411 1934	8.416 0657	23
38	8.391 2237	8.396 3241	8.401 3652	8.406 3484	8.411 2751	8.416 1465	22
39	8.391 3092	8.396 4086	8.401 4487	8.406 4310	8.411 3567	8.416 2272	21
40	8.391 3947	8.396 4930	8.401 5322	8.406 5135	8.411 4383	8.416 3079	20
41	8.391 4801	8.396 5775	8.401 6157	8.406 5961	8.411 5200	8.416 3886	19
42	8.391 5656	8.396 6620	8.401 6992	8.406 6786	8.411 6015	8.416 4693	18
43	8.391 6510	8.396 7464	8.401 7826	8.406 7611	8.411 6831	8.416 5499	17
44	8.391 7364	8.396 8308	8.401 8661	8.406 8436	8.411 7647	8.416 6306	16
45	8.391 8218	8.396 9152	8.401 9495	8.406 9261	8.411 8462	8.416 7112	15
46	8.391 9072	8.396 9996	8.402 0329	8.407 0085	8.411 9278	8.416 7919	14
47	8.391 9926	8.397 0840	8.402 1163	8.407 0910	8.412 0093	8.416 8725	13
48	8.392 0779	8.397 1683	8.402 1997	8.407 1734	8.412 0908	8.416 9531	12
49	8.392 1633	8.397 2527	8.402 2831	8.407 2558	8.412 1723	8.417 0336	11
50	8.392 2486	8.397 3370	8.402 3664	8.407 3382	8.412 2537	8.417 1142	10
51	8.392 3339	8.397 4213	8.402 4497	8.407 4206	8.412 3352	8.417 1948	9
52	8.392 4191	8.397 5056	8.402 5331	8.407 5030	8.412 4166	8.417 2753	8
53	8.392 5044	8.397 5898	8.402 6164	8.407 5853	8.412 4981	8.417 3558	7
54	8.392 5897	8.397 6741	8.402 6996	8.407 6677	8.412 5795	8.417 4363	6
55	8.392 6749	8.397 7583	8.402 7829	8.407 7500	8.412 6609	8.417 5168	5
56	8.392 7601	8.397 8425	8.402 8662	8.407 8323	8.412 7422	8.417 5973	4
57	8.392 8453	8.397 9268	8.402 9494	8.407 9146	8.412 8236	8.417 6777	3
58	8.392 9305	8.398 0109	8.403 0326	8.407 9969	8.412 9050	8.417 7582	2
59	8.393 0156	8.398 0951	8.403 1158	8.408 0791	8.412 9863	8.417 8386	1
60	8.393 1008	8.398 1793	8.403 1990	8.408 1614	8.413 0676	8.417 9190	0
″	35′	34′	33′	32′	31′	30′	″

cos 88°

tang 1°

″	24′	25′	26′	27′	28′	29′	″
0	8.388 0918	8.393 2336	8.398 3152	8.403 3381	8.408 3037	8.413 2132	60
1	8.388 1780	8.393 3187	8.398 3994	8.403 4213	8.408 3859	8.413 2945	59
2	8.388 2642	8.393 4039	8.398 4835	8.403 5045	8.408 4682	8.413 3759	58
3	8.388 3504	8.393 4891	8.398 5677	8.403 5877	8.408 5505	8.413 4572	57
4	8.388 4365	8.393 5742	8.398 6519	8.403 6709	8.408 6327	8.413 5385	56
5	8.388 5227	8.393 6593	8.398 7360	8.403 7541	8.408 7149	8.413 6198	55
6	8.388 6088	8.393 7444	8.398 8201	8.403 8372	8.408 7971	8.413 7011	54
7	8.388 6949	8.393 8295	8.398 9042	8.403 9203	8.408 8793	8.413 7823	53
8	8.388 7809	8.393 9145	8.398 9883	8.404 0035	8.408 9615	8.413 8636	52
9	8.388 8670	8.393 9996	8.399 0723	8.404 0866	8.409 0436	8.413 9448	51
10	8.388 9530	8.394 0846	8.399 1564	8.404 1696	8.409 1258	8.414 0261	50
11	8.389 0391	8.394 1696	8.399 2404	8.404 2527	8.409 2079	8.414 1073	49
12	8.389 1251	8.394 2546	8.399 3244	8.404 3358	8.409 2900	8.414 1885	48
13	8.389 2111	8.394 3396	8.399 4084	8.404 4188	8.409 3721	8.414 2696	47
14	8.389 2970	8.394 4246	8.399 4924	8.404 5018	8.409 4542	8.414 3508	46
15	8.389 3830	8.394 5095	8.399 5764	8.404 5848	8.409 5362	8.414 4319	45
16	8.389 4689	8.394 5945	8.399 6603	8.404 6678	8.409 6183	8.414 5131	44
17	8.389 5548	8.394 6794	8.399 7442	8.404 7508	8.409 7003	8.414 5942	43
18	8.389 6408	8.394 7643	8.399 8282	8.404 8337	8.409 7823	8.414 6753	42
19	8.389 7266	8.394 8492	8.399 9121	8.404 9167	8.409 8643	8.414 7564	41
20	8.389 8125	8.394 9340	8.399 9959	8.404 9996	8.409 9463	8.414 8374	40
21	8.389 8984	8.395 0189	8.400 0798	8.405 0825	8.410 0283	8.414 9185	39
22	8.389 9842	8.395 1037	8.400 1637	8.405 1654	8.410 1103	8.414 9995	38
23	8.390 0700	8.395 1885	8.400 2475	8.405 2483	8.410 1922	8.415 0805	37
24	8.390 1558	8.395 2733	8.400 3313	8.405 3311	8.410 2741	8.415 1616	36
25	8.390 2416	8.395 3581	8.400 4151	8.405 4140	8.410 3560	8.415 2425	35
26	8.390 3274	8.395 4429	8.400 4989	8.405 4968	8.410 4379	8.415 3235	34
27	8.390 4131	8.395 5276	8.400 5827	8.405 5796	8.410 5198	8.415 4045	33
28	8.390 4989	8.395 6124	8.400 6664	8.405 6624	8.410 6017	8.415 4854	32
29	8.390 5846	8.395 6971	8.400 7502	8.405 7452	8.410 6835	8.415 5664	31
30	8.390 6703	8.395 7818	8.400 8339	8.405 8280	8.410 7653	8.415 6473	30
31	8.390 7560	8.395 8665	8.400 9176	8.405 9107	8.410 8472	8.415 7282	29
32	8.390 8417	8.395 9511	8.401 0013	8.405 9935	8.410 9290	8.415 8091	28
33	8.390 9273	8.396 0358	8.401 0850	8.406 0762	8.411 0107	8.415 8900	27
34	8.391 0129	8.396 1204	8.401 1686	8.406 1589	8.411 0925	8.415 9708	26
35	8.391 0986	8.396 2050	8.401 2523	8.406 2416	8.411 1743	8.416 0517	25
36	8.391 1842	8.396 2897	8.401 3359	8.406 3242	8.411 2560	8.416 1325	24
37	8.391 2697	8.396 3742	8.401 4195	8.406 4069	8.411 3377	8.416 2133	23
38	8.391 3553	8.396 4588	8 401 5031	8.406 4895	8.411 4194	8.416 2941	22
39	8.391 4409	8.396 5434	8.401 5867	8.406 5722	8.411 5011	8.416 3749	21
40	8.391 5264	8.396 6279	8.401 6702	8.406 6548	8.411 5828	8.416 4556	20
41	8.391 6119	8.396 7124	8.401 7538	8.406 7374	8.411 6645	8.416 5364	19
42	8.391 6974	8.396 7969	8.401 8373	8.406 8199	8.411 7461	8.416 6171	18
43	8.391 7829	8.396 8814	8.401 9208	8.406 9025	8.411 8278	8.416 6979	17
44	8.391 8684	8.396 9659	8.402 0043	8.406 9850	8.411 9094	8.416 7786	16
45	8.391 9538	8.397 0503	8.402 0878	8.407 0676	8.411 9910	8.416 8593	15
46	8.392 0393	8.397 1348	8.402 1713	8.407 1501	8.412 0726	8.416 9399	14
47	8.392 1247	8.397 2192	8.402 2547	8.407 2326	8.412 1541	8.417 0206	13
48	8.392 2101	8.397 3036	8.402 3381	8.407 3151	8.412 2357	8.417 1012	12
49	8.392 2955	8.397 3880	8.402 4216	8.407 3975	8.412 3172	8.417 1819	11
50	8.392 3808	8.397 4724	8.402 5050	8.407 4800	8.412 3988	8.417 2625	10
51	8.392 4662	8.397 5567	8.402 5884	8.407 5624	8.412 4803	8.417 3431	9
52	8.392 5515	8.397 6411	8.402 6717	8.407 6449	8.412 5618	8.417 4237	8
53	8.392 6368	8.397 7254	8.402 7551	8.407 7273	8.412 6432	8.417 5043	7
54	8.392 7221	8.397 8097	8.402 8384	8.407 8097	8.412 7247	8.417 5848	6
55	8.392 8074	8.397 8940	8.402 9217	8.407 8920	8.412 8062	8.417 6654	5
56	8.392 8927	8.397 9782	8.403 0050	8.407 9744	8.412 8876	8.417 7459	4
57	8.392 9779	8.398 0625	8.403 0883	8.408 0567	8.412 9690	8.417 8264	3
58	8.393 0631	8.398 1467	8.403 1716	8.408 1391	8.413 0504	8.417 9069	2
59	8.393 1484	8.398 2310	8.403 2549	8.408 2214	8.413 1318	8.417 9874	1
60	8.393 2336	8.398 3152	8.403 3381	8.408 3027	8.413 2132	8.418 0679	0
″	35′	34′	33′	32′	31′	30′	″

cotg 88°

″	30′	31′	32′	33′	34′	35′	″
0	8.417 9190	8.422 7168	8.427 4621	8.432 1561	8.436 7999	8.441 3944	60
1	8.417 9994	8.422 7963	8.427 5408	8.432 2339	8.436 8768	8.441 4706	59
2	8.418 0798	8.422 8758	8.427 6194	8.432 3117	8.436 9538	8.441 5468	58
3	8.418 1602	8.422 9553	8.427 6980	8.432 3895	8.437 0307	8.441 6229	57
4	8.418 2405	8.423 0348	8.427 7766	8.432 4672	8.437 1077	8.441 6990	56
5	8.418 3209	8.423 1142	8.427 8552	8.432 5450	8.437 1846	8.441 7751	55
6	8.418 4012	8.423 1937	8.427 9338	8.432 6227	8.437 2615	8.441 8512	54
7	8.418 4815	8.423 2731	8.428 0124	8.432 7004	8.437 3384	8.441 9273	53
8	8.418 5618	8.423 3525	8.428 0909	8.432 7781	8.437 4153	8.442 0034	52
9	8.418 6421	8.423 4319	8.428 1694	8.432 8558	8.437 4921	8.442 0795	51
10	8.418 7223	8.423 5113	8.428 2480	8.432 9335	8.437 5690	8.442 1555	50
11	8.418 8026	8.423 5907	8.428 3265	8.433 0112	8.437 6458	8.442 2315	49
12	8.418 8828	8.423 6700	8.428 4050	8.433 0888	8.437 7227	8.442 3076	48
13	8.418 9630	8.423 7494	8.428 4835	8.433 1665	8.437 7995	8.442 3836	47
14	8.419 0432	8.423 8287	8.428 5619	8.433 2441	8.437 8763	8.442 4596	46
15	8.419 1234	8.423 9080	8.428 6404	8.433 3217	8.437 9531	8.442 5355	45
16	8.419 2036	8.423 9873	8.428 7188	8.433 3993	8.438 0298	8.442 6115	44
17	8.419 2838	8.424 0666	8.428 7972	8.433 4769	8.438 1066	8.442 6875	43
18	8.419 3639	8.424 1458	8.428 8756	8.433 5544	8.438 1833	8.442 7634	42
19	8.419 4441	8.424 2251	8.428 9540	8.433 6320	8.438 2601	8.442 8393	41
20	8.419 5242	8.424 3043	8.429 0324	8.433 7095	8.438 3368	8.442 9152	40
21	8.419 6043	8.424 3836	8.429 1108	8.433 7871	8.438 4135	8.442 9911	39
22	8.419 6844	8.424 4628	8.429 1891	8.433 8646	8.438 4902	8.443 0670	38
23	8.419 7644	8.424 5420	8.429 2675	8.433 9421	8.438 5669	8.443 1429	37
24	8.419 8445	8.424 6211	8.429 3458	8.434 0196	8.438 6435	8.443 2187	36
25	8.419 9245	8.424 7003	8.429 4241	8.434 0970	8.438 7202	8.443 2946	35
26	8.420 0046	8.424 7795	8.429 5024	8.434 1745	8.438 7968	8.443 3704	34
27	8.420 0846	8.424 8586	8.429 5807	8.434 2519	8.438 8734	8.443 4462	33
28	8.420 1646	8.424 9377	8.429 6590	8.434 3294	8.438 9501	8.443 5221	32
29	8.420 2446	8.425 0168	8.429 7372	8.434 4068	8.439 0266	8.443 5978	31
30	8.420 3245	8.425 0959	8.429 8154	8.434 4842	8.439 1032	8.443 6736	30
31	8.420 4045	8.425 1750	8.429 8937	8.434 5616	8.439 1798	8.443 7494	29
32	8.420 4844	8.425 2541	8.429 9719	8.434 6389	8.439 2564	8.443 8251	28
33	8.420 5644	8.425 3331	8.430 0501	8.434 7163	8.439 3329	8.443 9009	27
34	8.420 6443	8.425 4122	8.430 1283	8.434 7937	8.439 4094	8.443 9766	26
35	8.420 7242	8.425 4912	8.430 2064	8.434 8710	8.439 4859	8.444 0523	25
36	8.420 8040	8.425 5702	8.430 2846	8.434 9483	8.439 5624	8.444 1280	24
37	8.420 8839	8.425 6492	8.430 3627	8.435 0256	8.439 6389	8.444 2037	23
38	8.420 9638	8.425 7282	8.430 4409	8.435 1029	8.439 7154	8.444 2794	22
39	8.421 0436	8.425 8071	8.430 5190	8.435 1802	8.439 7919	8.444 3551	21
40	8.421 1234	8.425 8861	8.430 5971	8.435 2574	8.439 8683	8.444 4307	20
41	8.421 2032	8.425 9650	8.430 6751	8.435 3347	8.439 9447	8.444 5063	19
42	8.421 2830	8.426 0439	8.430 7532	8.435 4119	8.440 0212	8.444 5820	18
43	8.421 3628	8.426 1229	8.430 8313	8.435 4892	8.440 0976	8.444 6576	17
44	8.421 4426	8.426 2018	8.430 9093	8.435 5664	8.440 1740	8.444 7332	16
45	8.421 5223	8.426 2806	8.430 9873	8.435 6436	8.440 2503	8.444 8087	15
46	8.421 6020	8.426 3595	8.431 0654	8.435 7207	8.440 3267	8.444 8843	14
47	8.421 6818	8.426 4383	8.431 1434	8.435 7979	8.440 4031	8.444 9599	13
48	8.421 7615	8.426 5172	8.431 2213	8.435 8751	8.440 4794	8.445 0354	12
49	8.421 8412	8.426 5960	8.431 2993	8.435 9522	8.440 5557	8.445 1109	11
50	8.421 9208	8.426 6748	8.431 3773	8.436 0293	8.440 6321	8.445 1865	10
51	8.422 0005	8.426 7536	8.431 4552	8.436 1064	8.440 7083	8.445 2620	9
52	8.422 0801	8.426 8324	8.431 5332	8.436 1835	8.440 7846	8.445 3375	8
53	8.422 1598	8.426 9111	8.431 6111	8.436 2606	8.440 8609	8.445 4129	7
54	8.422 2394	8.426 9899	8.431 6890	8.436 3377	8.440 9372	8.445 4884	6
55	8.422 3190	8.427 0686	8.431 7669	8.436 4148	8.441 0134	8.445 5638	5
56	8.422 3986	8.427 1474	8.431 8447	8.436 4918	8.441 0896	8.445 6393	4
57	8.422 4782	8.427 2261	8.431 9226	8.436 5688	8.441 1659	8.445 7147	3
58	8.422 5577	8.427 3048	8.432 0004	8.436 6459	8.441 2421	8.445 7901	2
59	8.422 6373	8.427 3834	8.432 0783	8.436 7229	8.441 3183	8.445 8655	1
60	8.422 7168	8.427 4621	8.432 1561	8.436 7999	8.441 3944	8.445 9409	0
″	29′	28′	27′	26′	25′	24′	″

tang 1°

″	30′	31′	32′	33′	34′	35′	″
0	8.418 0679	8.422 8690	8.427 6176	8.432 3150	8.436 9622	8.441 5603	60
1	8.418 1483	8.422 9485	8.427 6963	8.432 3929	8.437 0392	8.441 6365	59
2	8.418 2288	8.423 0281	8.427 7750	8.432 4707	8.437 1163	8.441 7127	58
3	8.418 3092	8.423 1076	8.427 8537	8.432 5486	8.437 1933	8.441 7889	57
4	8.418 3896	8.423 1872	8.427 9324	8.432 6264	8.437 2703	8.441 8651	56
5	8.418 4700	8.423 2667	8.428 0110	8.432 7042	8.437 3473	8.441 9413	55
6	8.418 5504	8.423 3462	8.428 0897	8.432 7820	8.437 4242	8.442 0174	54
7	8.418 6307	8.423 4257	8.428 1683	8.432 8598	8.437 5012	8.442 0936	53
8	8.418 7111	8.423 5051	8.428 2469	8.432 9375	8.437 5781	8.442 1697	52
9	8.418 7914	8.423 5846	8.428 3255	8.433 0153	8.437 6550	8.442 2458	51
10	8.418 8717	8.423 6640	8.428 4041	8.433 0930	8.437 7320	8.442 3219	50
11	8.418 9520	8.423 7434	8.428 4826	8.433 1707	8.437 8089	8.442 3980	49
12	8.419 0323	8.423 8229	8.428 5612	8.433 2484	8.437 8857	8.442 4741	48
13	8.419 1126	8.423 9023	8.428 6397	8.433 3261	8.437 9626	8.442 5502	47
14	8.419 1929	8.423 9816	8.428 7182	8.433 4038	8.438 0395	8.442 6262	46
15	8.419 2731	8.424 0610	8.428 7968	8.433 4815	8.438 1163	8.442 7023	45
16	8.419 3533	8.424 1404	8.428 8752	8.433 5591	8.438 1931	8.442 7783	44
17	8.419 4336	8.424 2197	8.428 9537	8.433 6368	8.438 2700	8.442 8543	43
18	8.419 5138	8.424 2990	8.429 0322	8.433 7144	8.438 3468	8.442 9303	42
19	8.419 5940	8.424 3783	8.429 1106	8.433 7920	8.438 4235	8.443 0063	41
20	8.419 6741	8.424 4576	8.429 1891	8.433 8696	8.438 5003	8.443 0822	40
21	8.419 7543	8.424 5369	8.429 2675	8.433 9472	8.438 5771	8.443 1582	39
22	8.419 8344	8.424 6162	8.429 3459	8.434 0248	8.438 6538	8.443 2341	38
23	8.419 9146	8.424 6954	8.429 4243	8.434 1023	8.438 7306	8.443 3101	37
24	8.419 9947	8.424 7747	8.429 5027	8.434 1799	8.438 8073	8.443 3860	36
25	8.420 0748	8.424 8539	8.429 5811	8.434 2574	8.438 8840	8.443 4619	35
26	8.420 1549	8.424 9331	8.429 6594	8.434 3349	8.438 9607	8.443 5378	34
27	8.420 2349	8.425 0123	8.429 7377	8.434 4124	8.439 0374	8.443 6137	33
28	8.420 3150	8.425 0915	8.429 8161	8.434 4899	8.439 1140	8.443 6895	32
29	8.420 3950	8.425 1706	8.429 8944	8.434 5674	8.439 1907	8.443 7654	31
30	8.420 4750	8.425 2498	8.429 9727	8.434 6448	8.439 2673	8.443 8412	30
31	8.420 5550	8.425 3289	8.430 0510	8.434 7223	8.439 3440	8.443 9171	29
32	8.420 6350	8.425 4080	8.430 1292	8.434 7997	8.439 4206	8.443 9929	28
33	8.420 7150	8.425 4872	8.430 2075	8.434 8771	8.439 4972	8.444 0687	27
34	8.420 7950	8.425 5662	8.430 2857	8.434 9545	8.439 5738	8.444 1444	26
35	8.420 8749	8.425 6453	8.430 3639	8.435 0319	8.439 6503	8.444 2202	25
36	8.420 9549	8.425 7244	8.430 4422	8.435 1093	8.439 7269	8.444 2960	24
37	8.421 0348	8.425 8034	8.430 5204	8.435 1867	8.439 8034	8.444 3717	23
38	8.421 1147	8.425 8825	8.430 5985	8.435 2640	8.439 8800	8.444 4475	22
39	8.421 1946	8.425 9615	8.430 6767	8.435 3413	8.439 9565	8.444 5232	21
40	8.421 2745	8.426 0405	8.430 7549	8.435 4187	8.440 0330	8.444 5989	20
41	8.421 3543	8.426 1195	8.430 8330	8.435 4960	8.440 1095	8.444 6746	19
42	8.421 4342	8.426 1985	8.430 9111	8.435 5733	8.440 1860	8.444 7503	18
43	8.421 5140	8.426 2774	8.430 9892	8.435 6506	8.440 2624	8.444 8259	17
44	8.421 5938	8.426 3564	8.431 0673	8.435 7278	8.440 3389	8.444 9016	16
45	8.421 6736	8.426 4353	8.431 1454	8.435 8051	8.440 4153	8.444 9772	15
46	8.421 7534	8.426 5142	8.431 2235	8.435 8823	8.440 4918	8.445 0529	14
47	8.421 8332	8.426 5932	8.431 3016	8.435 9595	8.440 5682	8.445 1285	13
48	8.421 9130	8.426 6720	8.431 3796	8.436 0368	8.440 6446	8.445 2041	12
49	8.421 9927	8.426 7509	8.431 4576	8.436 1139	8.440 7209	8.445 2797	11
50	8.422 0725	8.426 8298	8.431 5356	8.436 1911	8.440 7973	8.445 3552	10
51	8.422 1522	8.426 9086	8.431 6136	8.436 2683	8.440 8737	8.445 4308	9
52	8.422 2319	8.426 9875	8.431 6916	8.436 3455	8.440 9500	8.445 5063	8
53	8.422 3116	8.427 0663	8.431 7696	8.436 4226	8.441 0263	8.445 5819	7
54	8.422 3912	8.427 1451	8.431 8476	8.436 4997	8.441 1027	8.445 6574	6
55	8.422 4709	8.427 2239	8.431 9255	8.436 5769	8.441 1790	8.445 7329	5
56	8.422 5505	8.427 3027	8.432 0034	8.436 6540	8.441 2553	8.445 8084	4
57	8.422 6302	8.427 3814	8.432 0814	8.436 7310	8.441 3315	8.445 8839	3
58	8.422 7098	8.427 4602	8.432 1593	8.436 8081	8.441 4078	8.445 9594	2
59	8.422 7894	8.427 5389	8.432 2372	8.436 8852	8.441 4841	8.446 0348	1
60	8.422 8690	8.427 6176	8.432 3150	8.436 9622	8.441 5603	8.446 1103	0
″	29′	28′	27′	26′	25′	24′	″

cotg 88°

sin 1°

″	36′	37′	38′	39′	40′	41′	″
0	8.445 9409	8.450 4402	8.454 8934	8.459 3013	8.463 6649	8.467 9850	60
1	8.446 0163	8.450 5148	8.454 9672	8.459 3744	8.463 7372	8.468 0567	59
2	8.446 0916	8.450 5894	8.455 0410	8.459 4474	8.463 8096	8.468 1283	58
3	8.446 1670	8.450 6640	8.455 1148	8.459 5205	8.463 8819	8.468 1999	57
4	8.446 2423	8.450 7385	8.455 1886	8.459 5936	8.463 9542	8.468 2715	56
5	8.446 3176	8.450 8131	8.455 2624	8.459 6666	8.464 0265	8.468 3431	55
6	8.446 3929	8.450 8876	8.455 3362	8.459 7396	8.464 0988	8.468 4147	54
7	8.446 4682	8.450 9621	8.455 4099	8.459 8126	8.464 1711	8.468 4862	53
8	8.446 5435	8.451 0366	8.455 4837	8.459 8856	8.464 2434	8.468 5578	52
9	8.446 6188	8.451 1111	8.455 5574	8.459 9586	8.464 3156	8.468 6293	51
10	8.446 6940	8.451 1856	8.455 6311	8.460 0316	8.464 3879	8.468 7009	50
11	8.446 7693	8.451 2601	8.455 7048	8.460 1046	8.464 4601	8.468 7724	49
12	8.446 8445	8.451 3345	8.455 7785	8.460 1775	8.464 5323	8.468 8439	48
13	8.446 9197	8.451 4090	8.455 8522	8.460 2505	8.464 6046	8.468 9154	47
14	8.446 9949	8.451 4834	8.455 9259	8.460 3234	8.464 6768	8.468 9869	46
15	8.447 0701	8.451 5578	8.455 9996	8.460 3963	8.464 7489	8.469 0584	45
16	8.447 1453	8.451 6322	8.456 0732	8.460 4692	8.464 8211	8.469 1298	44
17	8.447 2205	8.451 7066	8.456 1468	8.460 5421	8.464 8933	8.469 2013	43
18	8.447 2956	8.451 7810	8.456 2205	8.460 6150	8.464 9654	8.469 2727	42
19	8.447 3707	8.451 8553	8.456 2941	8.460 6878	8.465 0376	8.469 3441	41
20	8.447 4459	8.451 9297	8.456 3677	8.460 7607	8.465 1097	8.469 4156	40
21	8.447 5210	8.452 0040	8.456 4412	8.460 8335	8.465 1818	8.469 4870	39
22	8.447 5961	8.452 0784	8.456 5148	8.460 9064	8.465 2539	8.469 5583	38
23	8.447 6712	8.452 1527	8.456 5884	8.460 9792	8.465 3260	8.469 6297	37
24	8.447 7462	8.452 2270	8.456 6619	8.461 0520	8.465 3981	8.469 7011	36
25	8.447 8213	8.452 3013	8.456 7354	8.461 1248	8.465 4702	8.469 7725	35
26	8.447 8963	8.452 3755	8.456 8090	8.461 1976	8.465 5422	8.469 8438	34
27	8.447 9714	8.452 4498	8.456 8825	8.461 2703	8.465 6143	8.469 9151	33
28	8.448 0464	8.452 5240	8.456 9560	8.461 3431	8.465 6863	8.469 9865	32
29	8.448 1214	8.452 5983	8.457 0295	8.461 4158	8.465 7583	8.470 0578	31
30	8.448 1964	8.452 6725	8.457 1029	8.461 4886	8.465 8303	8.470 1291	30
31	8.448 2714	8.452 7467	8.457 1764	8.461 5613	8.465 9023	8.470 2003	29
32	8.448 3463	8.452 8209	8.457 2498	8.461 6340	8.465 9743	8.470 2716	28
33	8.448 4213	8.452 8951	8.457 3233	8.461 7067	8.466 0463	8.470 3429	27
34	8.448 4962	8.452 9693	8.457 3967	8.461 7794	8.466 1182	8.470 4141	26
35	8.448 5712	8.453 0434	8.457 4701	8.461 8520	8.466 1902	8.470 4854	25
36	8.448 6461	8.453 1176	8.457 5435	8.461 9247	8.466 2621	8.470 5566	24
37	8.448 7210	8.453 1917	8.457 6169	8.461 9973	8.466 3340	8.470 6278	23
38	8.448 7959	8.453 2659	8.457 6902	8.462 0700	8.466 4059	8.470 6990	22
39	8.448 8708	8.453 3400	8.457 7636	8.462 1426	8.466 4778	8.470 7702	21
40	8.448 9456	8.453 4141	8.457 8369	8.462 2152	8.466 5497	8.470 8414	20
41	8.449 0205	8.453 4881	8.457 9103	8.462 2878	8.466 6216	8.470 9126	19
42	8.449 0953	8.453 5622	8.457 9836	8.462 3604	8.466 6935	8.470 9837	18
43	8.449 1701	8.453 6363	8.458 0569	8.462 4330	8.466 7653	8.471 0549	17
44	8.449 2450	8.453 7103	8.458 1302	8.462 5055	8.466 8372	8.471 1260	16
45	8.449 3198	8.453 7844	8.458 2035	8.462 5781	8.466 9090	8.471 1971	15
46	8.449 3945	8.453 8584	8.458 2768	8.462 6506	8.466 9808	8.471 2682	14
47	8.449 4693	8.453 9324	8.458 3500	8.462 7231	8.467 0526	8.471 3393	13
48	8.449 5441	8.454 0064	8.458 4233	8.462 7957	8.467 1244	8.471 4104	12
49	8.449 6188	8.454 0804	8.458 4965	8.462 8682	8.467 1962	8.471 4815	11
50	8.449 6936	8.454 1543	8.458 5697	8.462 9406	8.467 2680	8.471 5526	10
51	8.449 7683	8.454 2283	8.458 6429	8.463 0131	8.467 3397	8.471 6236	9
52	8.449 8430	8.454 3023	8.458 7161	8.463 0856	8.467 4115	8.471 6947	8
53	8.449 9177	8.454 3762	8.458 7893	8.463 1580	8.467 4832	8.471 7657	7
54	8.449 9924	8.454 4501	8.458 8625	8.463 2305	8.467 5549	8.471 8367	6
55	8.450 0671	8.454 5240	8.458 9357	8.463 3029	8.467 6266	8.471 9077	5
56	8.450 1417	8.454 5979	8.459 0088	8.463 3753	8.467 6983	8.471 9787	4
57	8.450 2164	8.454 6718	8.459 0819	8.463 4477	8.467 7700	8.472 0497	3
58	8.450 2910	8.454 7457	8.459 1551	8.463 5201	8.467 8417	8.472 1207	2
59	8.450 3656	8.454 8195	8.459 2282	8.463 5925	8.467 9134	8.472 1916	1
60	8.450 4402	8.454 8934	8.459 3013	8.463 6649	8.467 9850	8.472 2626	0
″	23′	22′	21′	20′	19′	18′	″

cos 88°

tang 1°

″	36′	37′	38′	39′	40′	41′	″
0	8.446 1103	8.450 6131	8.455 0699	8.459 4814	8.463 8486	8.468 1725	60
1	8.446 1857	8.450 6878	8.455 1438	8.459 5545	8.463 9211	8.468 2442	59
2	8.446 2611	8.450 7624	8.455 2176	8.459 6277	8.463 9935	8.468 3159	58
3	8.446 3365	8.450 8371	8.455 2915	8.459 7008	8.464 0659	8.468 3875	57
4	8.446 4119	8.450 9117	8.455 3654	8.459 7739	8.464 1382	8.468 4592	56
5	8.446 4873	8.450 9863	8.455 4392	8.459 8470	8.464 2106	8.468 5309	55
6	8.446 5627	8.451 0609	8.455 5130	8.459 9201	8.464 2830	8.468 6025	54
7	8.446 6380	8.451 1354	8.455 5868	8.459 9932	8.464 3553	8.468 6741	53
8	8.446 7133	8.451 2100	8.455 6607	8.460 0662	8.464 4276	8.468 7458	52
9	8.446 7887	8.451 2846	8.455 7344	8.460 1393	8.464 5000	8.468 8174	51
10	8.446 8640	8.451 3591	8.455 8082	8.460 2123	8.464 5723	8.468 8890	50
11	8.446 9393	8.451 4336	8.455 8820	8.460 2853	8.464 6446	8.468 9605	49
12	8.447 0146	8.451 5081	8.455 9558	8.460 3584	8.464 7168	8.469 0321	48
13	8.447 0898	8.451 5826	8.456 0295	8.460 4314	8.464 7891	8.469 1037	47
14	8.447 1651	8.451 6571	8.456 1032	8.460 5043	8.464 8614	8.469 1752	46
15	8.447 2404	8.451 7316	8.456 1769	8.460 5773	8.464 9336	8.469 2468	45
16	8.447 3156	8.451 8061	8.456 2506	8.460 6503	8.465 0059	8.469 3183	44
17	8.447 3908	8.451 8805	8.456 3243	8.460 7232	8.465 0781	8.469 3898	43
18	8.447 4660	8.451 9549	8.456 3980	8.460 7962	8.465 1503	8.469 4613	42
19	8.447 5412	8.452 0294	8.456 4717	8.460 8691	8.465 2225	8.469 5328	41
20	8.447 6164	8.452 1038	8.456 5453	8.460 9420	8.465 2947	8.469 6043	40
21	8.447 6916	8.452 1782	8.456 6190	8.461 0149	8.465 3669	8.469 6757	39
22	8.447 7667	8.452 2526	8.456 6926	8.461 0878	8.465 4390	8.469 7472	38
23	8.447 8419	8.452 3269	8.456 7662	8.461 1607	8.465 5112	8.469 8186	37
24	8.447 9170	8.452 4013	8.456 8398	8.461 2336	8.465 5833	8.469 8900	36
25	8.447 9921	8.452 4757	8.456 9134	8.461 3064	8.465 6555	8.469 9615	35
26	8.448 0672	8.452 5500	8.456 9870	8.461 3792	8.465 7276	8.470 0329	34
27	8.448 1423	8.452 6243	8.457 0606	8.461 4521	8.465 7997	8.470 1043	33
28	8.448 2174	8.452 6986	8.457 1341	8.461 5249	8.465 8718	8.470 1756	32
29	8.448 2925	8.452 7729	8.457 2077	8.461 5977	8.465 9439	8.470 2470	31
30	8.448 3675	8.452 8472	8.457 2812	8.461 6705	8.466 0159	8.470 3184	30
31	8.448 4426	8.452 9215	8.457 3547	8.461 7433	8.466 0880	8.470 3897	29
32	8.448 5176	8.452 9957	8.457 4282	8.461 8160	8.466 1600	8.470 4611	28
33	8.448 5926	8.453 0700	8.457 5017	8.461 8888	8.466 2321	8.470 5324	27
34	8.448 6676	8.453 1442	8.457 5752	8.461 9615	8.466 3041	8.470 6037	26
35	8.448 7426	8.453 2184	8.457 6487	8.462 0343	8.466 3761	8.470 6750	25
36	8.448 8176	8.453 2926	8.457 7221	8.462 1070	8.466 4481	8.470 7463	24
37	8.448 8925	8.453 3668	8.457 7956	8.462 1797	8.466 5201	8.470 8176	23
38	8.448 9675	8.453 4410	8.457 8690	8.462 2524	8.466 5921	8.470 8888	22
39	8.449 0424	8.453 5152	8.457 9424	8.462 3251	8.466 6640	8.470 9601	21
40	8.449 1173	8.453 5893	8.458 0158	8.462 3978	8.466 7360	8.471 0313	20
41	8.449 1923	8.453 6635	8.458 0892	8.462 4704	8.466 8079	8.471 1026	19
42	8.449 2672	8.453 7376	8.458 1626	8.462 5431	8.466 8798	8.471 1738	18
43	8.449 3420	8.453 8117	8.458 2360	8.462 6157	8.466 9517	8.471 2450	17
44	8.449 4169	8.453 8859	8.458 3094	8.462 6883	8.467 0236	8.471 3162	16
45	8.449 4918	8.453 9599	8.458 3827	8.462 7609	8.467 0955	8.471 3874	15
46	8.449 5666	8.454 0340	8.458 4560	8.462 8335	8.467 1674	8.471 4586	14
47	8.449 6415	8.454 1081	8.458 5293	8.462 9061	8.467 2393	8.471 5297	13
48	8.449 7163	8.454 1822	8.458 6027	8.462 9787	8.467 3111	8.471 6009	12
49	8.449 7911	8.454 2562	8.458 6760	8.463 0512	8.467 3830	8.471 6720	11
50	8.449 8659	8.454 3302	8.458 7492	8.463 1238	8.467 4548	8.471 7431	10
51	8.449 9407	8.454 4043	8.458 8225	8.463 1963	8.467 5266	8.471 8142	9
52	8.450 0154	8.454 4783	8.458 8958	8.463 2689	8.467 5984	8.471 8853	8
53	8.450 0902	8.454 5523	8.458 9690	8.463 3414	8.467 6702	8.471 9564	7
54	8.450 1649	8.454 6262	8.459 0422	8.463 4139	8.467 7420	8.472 0275	6
55	8.450 2397	8.454 7002	8.459 1155	8.463 4864	8.467 8138	8.472 0986	5
56	8.450 3144	8.454 7742	8.459 1887	8.463 5588	8.467 8855	8.472 1696	4
57	8.450 3891	8.454 8481	8.459 2619	8.463 6313	8.467 9573	8.472 2407	3
58	8.450 4638	8.454 9220	8.459 3351	8.463 7038	8.468 0290	8.472 3117	2
59	8.450 5385	8.454 9960	8.459 4082	8.463 7762	8.468 1008	8.472 3827	1
60	8.450 6131	8.455 0699	8.459 4814	8.463 8486	8.468 1725	8.472 4538	0
″	23′	22′	21′	20′	19′	18′	″

cotg 88°

sin 1°

″	42′	43′	44′	45′	46′	47′	″
0	8.472 2626	8.476 4984	8.480 6932	8.484 8479	8.488 9632	8.493 0398	60
1	8.472 3335	8.476 5686	8.480 7628	8.484 9168	8.489 0314	8.493 1074	59
2	8.472 4044	8.476 6388	8.480 8323	8.484 9857	8.489 0997	8.493 1750	58
3	8.472 4753	8.476 7091	8.480 9019	8.485 0546	8.489 1679	8.493 2426	57
4	8.472 5462	8.476 7793	8.480 9714	8.485 1235	8.489 2361	8.493 3102	56
5	8.472 6171	8.476 8495	8.481 0410	8.485 1923	8.489 3043	8.493 3778	55
6	8.472 6880	8.476 9197	8.481 1105	8.485 2612	8.489 3726	8.493 4453	54
7	8.472 7589	8.476 9899	8.481 1800	8.485 3300	8.489 4407	8.493 5129	53
8	8.472 8297	8.477 0600	8.481 2495	8.485 3989	8.489 5089	8.493 5804	52
9	8.472 9006	8.477 1302	8.481 3190	8.485 4677	8.489 5771	8.493 6480	51
10	8.472 9714	8.477 2003	8.481 3884	8.485 5365	8.489 6453	8.493 7155	50
11	8.473 0422	8.477 2705	8.481 4579	8.485 6053	8.489 7134	8.493 7830	49
12	8.473 1130	8.477 3406	8.481 5273	8.485 6741	8.489 7816	8.493 8505	48
13	8.473 1838	8.477 4107	8.481 5968	8.485 7429	8.489 8497	8.493 9180	47
14	8.473 2546	8.477 4808	8.481 6662	8.485 8116	8.489 9178	8.493 9855	46
15	8.473 3254	8.477 5509	8.481 7356	8.485 8804	8.489 9859	8.494 0530	45
16	8.473 3962	8.477 6210	8.481 8050	8.485 9491	8.490 0540	8.494 1204	44
17	8.473 4669	8.477 6910	8.481 8744	8.486 0179	8.490 1221	8.494 1879	43
18	8.473 5377	8.477 7611	8.481 9438	8.486 0866	8.490 1902	8.494 2553	42
19	8.473 6084	8.477 8311	8.482 0132	8.486 1553	8.490 2582	8.494 3228	41
20	8.473 6791	8.477 9012	8.482 0825	8.486 2240	8.490 3263	8.494 3902	40
21	8.473 7498	8.477 9712	8.482 1519	8.486 2927	8.490 3943	8.494 4576	39
22	8.473 8205	8.478 0412	8.482 2212	8.486 3614	8.490 4624	8.494 5250	38
23	8.473 8912	8.478 1112	8.482 2905	8.486 4300	8.490 5304	8.494 5924	37
24	8.473 9618	8.478 1812	8.482 3599	8.486 4987	8.490 5984	8.494 6597	36
25	8.474 0325	8.478 2511	8.482 4292	8.486 5673	8.490 6664	8.494 7271	35
26	8.474 1032	8.478 3211	8.482 4985	8.486 6360	8.490 7344	8.494 7945	34
27	8.474 1738	8.478 3911	8.482 5677	8.486 7046	8.490 8024	8.494 8618	33
28	8.474 2444	8.478 4610	8.482 6370	8.486 7732	8.490 8703	8.494 9292	32
29	8.474 3150	8.478 5309	8.482 7063	8.486 8418	8.490 9383	8.494 9965	31
30	8.474 3856	8.478 6009	8.482 7755	8.486 9104	8.491 0063	8.495 0638	30
31	8.474 4562	8.478 6708	8.482 8448	8.486 9790	8.491 0742	8.495 1311	29
32	8.474 5268	8.478 7407	8.482 9140	8.487 0476	8.491 1421	8.495 1984	28
33	8.474 5974	8.478 8105	8.482 9832	8.487 1161	8.491 2100	8.495 2657	27
34	8.474 6679	8.478 8804	8.483 0524	8.487 1847	8.491 2779	8.495 3330	26
35	8.474 7385	8.478 9503	8.483 1216	8.487 2532	8.491 3458	8.495 4002	25
36	8.474 8090	8.479 0201	8.483 1908	8.487 3217	8.491 4137	8.495 4675	24
37	8.474 8795	8.479 0900	8.483 2600	8.487 3903	8.491 4816	8.495 5347	23
38	8.474 9500	8.479 1598	8.483 3291	8.487 4588	8.491 5495	8.495 6020	22
39	8.475 0205	8.479 2296	8.483 3983	8.487 5273	8.491 6173	8.495 6692	21
40	8.475 0910	8.479 2994	8.483 4674	8.487 5957	8.491 6852	8.495 7364	20
41	8.475 1615	8.479 3692	8.483 5365	8.487 6642	8.491 7530	8.495 8036	19
42	8.475 2320	8.479 4390	8.483 6057	8.487 7327	8.491 8208	8.495 8708	18
43	8.475 3024	8.479 5088	8.483 6748	8.487 8011	8.491 8886	8.495 9380	17
44	8.475 3729	8.479 5785	8.483 7439	8.487 8696	8.491 9564	8.496 0051	16
45	8.475 4433	8.479 6483	8.483 8129	8.487 9380	8.492 0242	8.496 0723	15
46	8.475 5137	8.479 7180	8.483 8820	8.488 0064	8.492 0920	8.496 1394	14
47	8.475 5841	8.479 7878	8.483 9511	8.488 0748	8.492 1598	8.496 2066	13
48	8.475 6545	8.479 8575	8.484 0201	8.488 1432	8.492 2275	8.496 2737	12
49	8.475 7249	8.479 9272	8.484 0892	8.488 2116	8.492 2953	8.496 3408	11
50	8.475 7953	8.479 9969	8.484 1582	8.488 2800	8.492 3630	8.496 4079	10
51	8.475 8656	8.480 0666	8.484 2272	8.488 3484	8.492 4307	8.496 4750	9
52	8.475 9360	8.480 1362	8.484 2962	8.488 4167	8.492 4984	8.496 5421	8
53	8.476 0063	8.480 2059	8.484 3652	8.488 4851	8.492 5661	8.496 6092	7
54	8.476 0766	8.480 2755	8.484 4342	8.488 5534	8.492 6338	8.496 6763	6
55	8.476 1470	8.480 3452	8.484 5032	8.488 6217	8.492 7015	8.496 7433	5
56	8.476 2173	8.480 4148	8.484 5721	8.488 6900	8.492 7692	8.496 8104	4
57	8.476 2876	8.480 4844	8.484 6411	8.488 7583	8.492 8368	8.496 8774	3
58	8.476 3578	8.480 5540	8.484 7100	8.488 8266	8.492 9045	8.496 9444	2
59	8.476 4281	8.480 6236	8.484 7790	8.488 8949	8.492 9721	8.497 0114	1
60	8.476 4984	8.480 6932	8.484 8479	8.488 9632	8.493 0398	8.497 0784	0
″	17′	16′	15′	14′	13′	12′	″

cos 88°

″	42′	43′	44′	45′	46′	47′	″
0	8.472 4538	8.476 6933	8.480 8920	8.485 0505	8.489 1696	8.493 2502	60
1	8.472 5248	8.476 7636	8.480 9616	8.485 1195	8.489 2380	8.493 3179	59
2	8.472 5957	8.476 8339	8.481 0312	8.485 1884	8.489 3063	8.493 3855	58
3	8.472 6667	8.476 9042	8.481 1008	8.485 2574	8.489 3746	8.493 4532	57
4	8.472 7377	8.476 9745	8.481 1704	8.485 3263	8.489 4429	8.493 5208	56
5	8.472 8086	8.477 0448	8.481 2400	8.485 3953	8.489 5112	8.493 5885	55
6	8.472 8796	8.477 1150	8.481 3096	8.485 4642	8.489 5794	8.493 6561	54
7	8.472 9505	8.477 1853	8.481 3792	8.485 5331	8.489 6477	8.493 7237	53
8	8.473 0214	8.477 2555	8.481 4487	8.485 6020	8.489 7159	8.493 7914	52
9	8.473 0923	8.477 3257	8.481 5183	8.485 6709	8.489 7842	8.493 8590	51
10	8.473 1632	8.477 3959	8.481 5878	8.485 7397	8.489 8524	8.493 9266	50
11	8.473 2341	8.477 4661	8.481 6574	8.485 8086	8.489 9206	8.493 9941	49
12	8.473 3050	8.477 5363	8.481 7269	8.485 8775	8.489 9888	8.494 0617	48
13	8.473 3758	8.477 6065	8.481 7964	8.485 9463	8.490 0570	8.494 1293	47
14	8.473 4467	8.477 6766	8.481 8659	8.486 0151	8.490 1252	8.494 1968	46
15	8.473 5175	8.477 7468	8.481 9353	8.486 0839	8.490 1934	8.494 2643	45
16	8.473 5884	8.477 8169	8.482 0048	8.486 1528	8.490 2615	8.494 3319	44
17	8.473 6592	8.477 8871	8.482 0743	8.486 2216	8.490 3297	8.494 3994	43
18	8.473 7300	8.477 9572	8.482 1437	8.486 2903	8.490 3978	8.494 4669	42
19	8.473 8008	8.478 0273	8.482 2131	8.486 3591	8.490 4660	8.494 5344	41
20	8.473 8715	8.478 0974	8.482 2826	8.486 4279	8.490 5341	8.494 6019	40
21	8.473 9423	8.478 1675	8.482 3520	8.486 4966	8.490 6022	8.494 6694	39
22	8.474 0131	8.478 2375	8.482 4214	8.486 5654	8.490 6703	8.494 7368	38
23	8.474 0838	8.478 3076	8.482 4908	8.486 6341	8.490 7384	8.494 8043	37
24	8.474 1545	8.478 3776	8.482 5602	8.486 7028	8.490 8065	8.494 8717	36
25	8.474 2253	8.478 4477	8.482 6295	8.486 7716	8.490 8745	8.494 9392	35
26	8.474 2960	8.478 5177	8.482 6989	8.486 8403	8.490 9426	8.495 0066	34
27	8.474 3667	8.478 5877	8.482 7682	8.486 9089	8.491 0106	8.495 0740	33
28	8.474 4374	8.478 6577	8.482 8376	8.486 9776	8.491 0787	8.495 1414	32
29	8.474 5080	8.478 7277	8.482 9069	8.487 0463	8.491 1467	8.495 2088	31
30	8.474 5787	8.478 7977	8.482 9762	8.487 1149	8.491 2147	8.495 2762	30
31	8.474 6494	8.478 8677	8.483 0455	8.487 1836	8.491 2827	8.495 3435	29
32	8.474 7200	8.478 9376	8.483 1148	8.487 2522	8.491 3507	8.495 4109	28
33	8.474 7906	8.479 0076	8.483 1841	8.487 3209	8.491 4187	8.495 4783	27
34	8.474 8612	8.479 0775	8.483 2533	8.487 3895	8.491 4866	8.495 5456	26
35	8.474 9319	8.479 1475	8.483 3226	8.487 4581	8.491 5546	8.495 6129	25
36	8.475 0025	8.479 2174	8.483 3919	8.487 5267	8.491 6226	8.495 6802	24
37	8.475 0730	8.479 2873	8.483 4611	8.487 5952	8.491 6905	8.495 7476	23
38	8.475 1436	8.479 3572	8.483 5303	8.487 6638	8.491 7584	8.495 8148	22
39	8.475 2142	8.479 4271	8.483 5995	8.487 7324	8.491 8263	8.495 8821	21
40	8.475 2847	8.479 4969	8.483 6687	8.487 8009	8.491 8942	8.495 9494	20
41	8.475 3553	8.479 5668	8.483 7379	8.487 8695	8.491 9621	8.496 0167	19
42	8.475 4258	8.479 6366	8.483 8071	8.487 9380	8.492 0300	8.496 0839	18
43	8.475 4963	8.479 7065	8.483 8763	8.488 0065	8.492 0979	8.496 1512	17
44	8.475 5668	8.479 7763	8.483 9454	8.488 0750	8.492 1658	8.496 2184	16
45	8.475 6373	8.479 8461	8.484 0146	8.488 1435	8.492 2336	8.496 2856	15
46	8.475 7078	8.479 9159	8.484 0837	8.488 2120	8.492 3015	8.496 3529	14
47	8.475 7783	8.479 9857	8.484 1528	8.488 2805	8.492 3693	8.496 4201	13
48	8.475 8487	8.480 0555	8.484 2220	8.488 3489	8.492 4371	8.496 4873	12
49	8.475 9192	8.480 1252	8.484 2911	8.488 4174	8.492 5049	8.496 5544	11
50	8.475 9896	8.480 1950	8.484 3602	8.488 4858	8.492 5727	8.496 6216	10
51	8.476 0600	8.480 2648	8.484 4292	8.488 5543	8.492 6405	8.496 6888	9
52	8.476 1304	8.480 3345	8.484 4983	8.488 6227	8.492 7083	8.496 7559	8
53	8.476 2008	8.480 4042	8.484 5674	8.488 6911	8.492 7761	8.496 8231	7
54	8.476 2712	8.480 4739	8.484 6364	8.488 7595	8.492 8438	8.496 8902	6
55	8.476 3416	8.480 5436	8.484 7055	8.488 8279	8.492 9116	8.496 9573	5
56	8.476 4120	8.480 6133	8.484 7745	8.488 8962	8.492 9793	8.497 0244	4
57	8.476 4823	8.480 6830	8.484 8435	8.488 9646	8.493 0471	8.497 0915	3
58	8.476 5527	8.480 7527	8.484 9125	8.489 0330	8.493 1148	8.497 1586	2
59	8.476 6230	8.480 8223	8.484 9815	8.489 1013	8.493 1825	8.497 2257	1
60	8.476 6933	8.480 8920	8.485 0505	8.489 1696	8.493 2502	8.497 2928	0
″	17′	16′	15′	14′	13′	12′	″

sin 1°

″	48′	49′	50′	51′	52′	53′	″
0	8.497 0784	8.501 0798	8.505 0447	8.508 9736	8.512 8673	8.516 7264	60
1	8.497 1454	8.501 1462	8.505 1105	8.509 0388	8.512 9319	8.516 7904	59
2	8.497 2124	8.501 2126	8.505 1762	8.509 1040	8.512 9965	8.516 8544	58
3	8.497 2794	8.501 2790	8.505 2420	8.509 1691	8.513 0611	8.516 9184	57
4	8.497 3463	8.501 3453	8.505 3077	8.509 2343	8.513 1256	8.516 9824	56
5	8.497 4133	8.501 4116	8.505 3735	8.509 2994	8.513 1902	8.517 0464	55
6	8.497 4802	8.501 4780	8.505 4392	8.509 3646	8.513 2548	8.517 1104	54
7	8.497 5472	8.501 5443	8.505 5049	8.509 4297	8.513 3193	8.517 1743	53
8	8.497 6141	8.501 6106	8.505 5706	8.509 4948	8.513 3838	8.517 2383	52
9	8.497 6810	8.501 6769	8.505 6363	8.509 5599	8.513 4484	8.517 3023	51
10	8.497 7479	8.501 7432	8.505 7020	8.509 6250	8.513 5129	8.517 3662	50
11	8.497 8148	8.501 8095	8.505 7677	8.509 6901	8.513 5774	8.517 4301	49
12	8.497 8817	8.501 8757	8.505 8333	8.509 7552	8.513 6419	8.517 4941	48
13	8.497 9485	8.501 9420	8.505 8990	8.509 8202	8.513 7064	8.517 5580	47
14	8.498 0154	8.502 0082	8.505 9646	8.509 8853	8.513 7708	8.517 6219	46
15	8.498 0823	8.502 0745	8.506 0303	8.509 9503	8.513 8353	8.517 6858	45
16	8.498 1491	8.502 1407	8.506 0959	8.510 0154	8.513 8997	8.517 7497	44
17	8.498 2159	8.502 2069	8.506 1615	8.510 0804	8.513 9642	8.517 8135	43
18	8.498 2827	8.502 2731	8.506 2271	8.510 1454	8.514 0286	8.517 8774	42
19	8.498 3495	8.502 3393	8.506 2927	8.510 2104	8.514 0931	8.517 9413	41
20	8.498 4163	8.502 4055	8.506 3583	8.510 2754	8.514 1575	8.518 0051	40
21	8.498 4831	8.502 4717	8.506 4239	8.510 3404	8.514 2219	8.518 0689	39
22	8.498 5499	8.502 5378	8.506 4894	8.510 4054	8.514 2863	8.518 1328	38
23	8.498 6167	8.502 6040	8.506 5550	8.510 4703	8.514 3507	8.518 1966	37
24	8.498 6834	8.502 6701	8.506 6205	8.510 5353	8.514 4150	8.518 2604	36
25	8.498 7502	8.502 7363	8.506 6861	8.510 6002	8.514 4794	8.518 3242	35
26	8.498 8169	8.502 8024	8.506 7516	8.510 6652	8.514 5438	8.518 3880	34
27	8.498 8836	8.502 8685	8.506 8171	8.510 7301	8.514 6081	8.518 4518	33
28	8.498 9504	8.502 9346	8.506 8826	8.510 7950	8.514 6725	8.518 5156	32
29	8.499 0171	8.503 0007	8.506 9481	8.510 8599	8.514 7368	8.518 5793	31
30	8.499 0838	8.503 0668	8.507 0136	8.510 9248	8.514 8011	8.518 6431	30
31	8.499 1504	8.503 1329	8.507 0791	8.510 9897	8.514 8654	8.518 7068	29
32	8.499 2171	8.503 1989	8.507 1446	8.511 0546	8.514 9297	8.518 7706	28
33	8.499 2838	8.503 2650	8.507 2100	8.511 1195	8.514 9940	8.518 8343	27
34	8.499 3504	8.503 3310	8.507 2755	8.511 1843	8.515 0583	8.518 8980	26
35	8.499 4171	8.503 3971	8.507 3409	8.511 2492	8.515 1226	8.518 9617	25
36	8.499 4837	8.503 4631	8.507 4063	8.511 3140	8.515 1869	8.519 0254	24
37	8.499 5503	8.503 5291	8.507 4717	8.511 3789	8.515 2511	8.519 0891	23
38	8.499 6169	8.503 5951	8.507 5371	8.511 4437	8.515 3154	8.519 1528	22
39	8.499 6835	8.503 6611	8.507 6025	8.511 5085	8.515 3796	8.519 2164	21
40	8.499 7501	8.503 7271	8.507 6679	8.511 5733	8.515 4438	8.519 2801	20
41	8.499 8167	8.503 7931	8.507 7333	8.511 6381	8.515 5080	8.519 3438	19
42	8.499 8833	8.503 8590	8.507 7987	8.511 7029	8.515 5722	8.519 4074	18
43	8.499 9499	8.503 9250	8.507 8640	8.511 7676	8.515 6364	8.519 4710	17
44	8.500 0164	8.503 9909	8.507 9294	8.511 8324	8.515 7006	8.519 5347	16
45	8.500 0829	8.504 0569	8.507 9947	8.511 8972	8.515 7648	8.519 5983	15
46	8.500 1495	8.504 1228	8.508 0601	8.511 9619	8.515 8290	8.519 6619	14
47	8.500 2160	8.504 1887	8.508 1254	8.512 0266	8.515 8931	8.519 7255	13
48	8.500 2825	8.504 2546	8.508 1907	8.512 0914	8.515 9573	8.519 7891	12
49	8.500 3490	8.504 3205	8.508 2560	8.512 1561	8.516 0214	8.519 8526	11
50	8.500 4155	8.504 3864	8.508 3213	8.512 2208	8.516 0856	8.519 9162	10
51	8.500 4820	8.504 4523	8.508 3866	8.512 2855	8.516 1497	8.519 9798	9
52	8.500 5485	8.504 5181	8.508 4518	8.512 3502	8.516 2138	8.520 0433	8
53	8.500 6149	8.504 5840	8.508 5171	8.512 4148	8.516 2779	8.520 1069	7
54	8.500 6814	8.504 6498	8.508 5823	8.512 4795	8.516 3420	8.520 1704	6
55	8.500 7478	8.504 7157	8.508 6476	8.512 5442	8.516 4061	8.520 2339	5
56	8.500 8142	8.504 7815	8.508 7128	8.512 6088	8.516 4701	8.520 2974	4
57	8.500 8806	8.504 8473	8.508 7780	8.512 6735	8.516 5342	8.520 3609	3
58	8.500 9471	8.504 9131	8.508 8432	8.512 7381	8.516 5983	8.520 4244	2
59	8.501 0135	8.504 9789	8.508 9084	8.512 8027	8.516 6623	8.520 4879	1
60	8.501 0798	8.505 0447	8.508 9736	8.512 8673	8.516 7264	8.520 5514	0
″	11′	10′	9′	8′	7′	6′	″

cos 88°

″	48′	49′	50′	51′	52′	53′	″
0	8.497 2928	8.501 2982	8.505 2671	8.509 2001	8.513 0978	8.516 9610	60
1	8.497 3598	8.501 3646	8.505 3329	8.509 2653	8.513 1625	8.517 0251	59
2	8.497 4269	8.501 4311	8.505 3987	8.509 3305	8.513 2272	8.517 0892	58
3	8.497 4939	8.501 4975	8.505 4646	8.509 3958	8.513 2918	8.517 1533	57
4	8.497 5610	8.501 5639	8.505 5304	8.509 4610	8.513 3564	8.517 2173	56
5	8.497 6280	8.501 6303	8.505 5962	8.509 5262	8.513 4211	8.517 2814	55
6	8.497 6950	8.501 6967	8.505 6620	8.509 5914	8.513 4857	8.517 3455	54
7	8.497 7620	8.501 7631	8.505 7277	8.509 6566	8.513 5503	8.517 4095	53
8	8.497 8290	8.501 8295	8.505 7935	8.509 7218	8.513 6149	8.517 4735	52
9	8.497 8959	8.501 8958	8.505 8593	8.509 7870	8.513 6795	8.517 5375	51
10	8.497 9629	8.501 9622	8.505 9250	8.509 8521	8.513 7441	8.517 6016	50
11	8.498 0299	8.502 0285	8.505 9908	8.509 9173	8.513 8087	8.517 6656	49
12	8.498 0968	8.502 0949	8.506 0565	8.509 9824	8.513 8732	8.517 7296	48
13	8.498 1638	8.502 1612	8.506 1222	8.510 0475	8.513 9378	8.517 7935	47
14	8.498 2307	8.502 2275	8.506 1879	8.510 1127	8.514 0023	8.517 8575	46
15	8.498 2976	8.502 2938	8.506 2536	8.510 1778	8.514 0668	8.517 9215	45
16	8.498 3645	8.502 3601	8.506 3193	8.510 2429	8.514 1314	8.517 9854	44
17	8.498 4314	8.502 4264	8.506 3850	8.510 3080	8.514 1959	8.518 0494	43
18	8.498 4983	8.502 4927	8.506 4507	8.510 3731	8.514 2604	8.518 1133	42
19	8.498 5652	8.502 5589	8.506 5164	8.510 4381	8.514 3249	8.518 1772	41
20	8.498 6320	8.502 6252	8.506 5820	8.510 5032	8.514 3894	8.518 2412	40
21	8.498 6989	8.502 6914	8.506 6477	8.510 5683	8.514 4539	8.518 3051	39
22	8.498 7657	8.502 7576	8.506 7133	8.510 6333	8.514 5183	8.518 3690	38
23	8.498 8325	8.502 8239	8.506 7789	8.510 6983	8.514 5828	8.518 4329	37
24	8.498 8994	8.502 8901	8.506 8445	8.510 7634	8.514 6472	8.518 4967	36
25	8.498 9662	8.502 9563	8.506 9101	8.510 8284	8.514 7117	8.518 5606	35
26	8.499 0330	8.503 0225	8.506 9757	8.510 8934	8.514 7761	8.518 6245	34
27	8.499 0998	8.503 0887	8.507 0413	8.510 9584	8.514 8405	8.518 6883	33
28	8.499 1666	8.503 1548	8.507 1069	8.511 0234	8.514 9049	8.518 7522	32
29	8.499 2333	8.503 2210	8.507 1724	8.511 0883	8.514 9693	8.518 8160	31
30	8.499 3001	8.503 2871	8.507 2380	8.511 1533	8.515 0337	8.518 8798	30
31	8.499 3668	8.503 3533	8.507 3035	8.511 2183	8.515 0981	8.518 9436	29
32	8.499 4336	8.503 4194	8.507 3691	8.511 2832	8.515 1625	8.519 0074	28
33	8.499 5003	8.503 4855	8.507 4346	8.511 3482	8.515 2268	8.519 0712	27
34	8.499 5670	8.503 5517	8.507 5001	8.511 4131	8.515 2912	8.519 1350	26
35	8.499 6337	8.503 6178	8.507 5656	8.511 4780	8.515 3555	8.519 1988	25
36	8.499 7004	8.503 6838	8.507 6311	8.511 5429	8.515 4199	8.519 2626	24
37	8.499 7671	8.503 7499	8.507 6966	8.511 6078	8.515 4842	8.519 3263	23
38	8.499 8338	8.503 8160	8.507 7621	8.511 6727	8.515 5485	8.519 3901	22
39	8.499 9005	8.503 8821	8.507 8275	8.511 7376	8.515 6128	8.519 4538	21
40	8.499 9671	8.503 9481	8.507 8930	8.511 8025	8.515 6771	8.519 5175	20
41	8.500 0338	8.504 0142	8.507 9584	8.511 8673	8.515 7414	8.519 5813	19
42	8.500 1004	8.504 0802	8.508 0239	8.511 9322	8.515 8057	8.519 6450	18
43	8.500 1671	8.504 1462	8.508 0893	8.511 9970	8.515 8699	8.519 7087	17
44	8.500 2337	8.504 2122	8.508 1547	8.512 0618	8.515 9342	8.519 7724	16
45	8.500 3003	8.504 2782	8.508 2201	8.512 1267	8.515 9984	8.519 8361	15
46	8.500 3669	8.504 3442	8.508 2855	8.512 1915	8.516 0627	8.519 8997	14
47	8.500 4335	8.504 4102	8.508 3509	8.512 2563	8.516 1269	8.519 9634	13
48	8.500 5000	8.504 4762	8.508 4163	8.512 3211	8.516 1911	8.520 0271	12
49	8.500 5666	8.504 5421	8.508 4817	8.512 3859	8.516 2553	8.520 0907	11
50	8.500 6332	8.504 6081	8.508 5470	8.512 4506	8.516 3195	8.520 1543	10
51	8.500 6997	8.504 6740	8.508 6124	8.512 5154	8.516 3837	8.520 2180	9
52	8.500 7663	8.504 7400	8.508 6777	8.512 5801	8.516 4479	8.520 2816	8
53	8.500 8328	8.504 8059	8.508 7430	8.512 6449	8.516 5121	8.520 3452	7
54	8.500 8993	8.504 8718	8.508 8084	8.512 7096	8.516 5762	8.520 4088	6
55	8.500 9658	8.504 9377	8.508 8737	8.512 7743	8.516 6404	8.520 4724	5
56	8.501 0323	8.505 0036	8.508 9390	8.512 8391	8.516 7045	8.520 5360	4
57	8.501 0988	8.505 0695	8.509 0042	8.512 9038	8.516 7687	8.520 5995	3
58	8.501 1653	8.505 1353	8.509 0695	8.512 9685	8.516 8328	8.520 6631	2
59	8.501 2317	8.505 2012	8.509 1348	8.513 0332	8.516 8969	8.520 7267	1
60	8.501 2982	8.505 2671	8.509 2001	8.513 0978	8.516 9610	8.520 7902	0
″	11′	10′	9′	8′	7′	6′	″

″	54′	55′	56′	57′	58′	59′	″
0	8.520 5514	8.524 3430	8.528 1017	8.531 8281	8.535 5228	8.539 1863	60
1	8.520 6148	8.524 4059	8.528 1641	8.531 8900	8.535 5842	8.539 2471	59
2	8.520 6783	8.524 4688	8.528 2264	8.531 9518	8.535 6455	8.539 3079	58
3	8.520 7417	8.524 5317	8.528 2888	8.532 0136	8.535 7068	8.539 3687	57
4	8.520 8052	8.524 5946	8.528 3511	8.532 0754	8.535 7680	8.539 4295	56
5	8.520 8686	8.524 6574	8.528 4135	8.532 1372	8.535 8293	8.539 4902	55
6	8.520 9320	8.524 7203	8.528 4758	8.532 1990	8.535 8906	8.539 5510	54
7	8.520 9954	8.524 7832	8.528 5381	8.532 2608	8.535 9518	8.539 6117	53
8	8.521 0588	8.524 8460	8.528 6004	8.532 3226	8.536 0131	8.539 6725	52
9	8.521 1222	8.524 9088	8.528 6627	8.532 3844	8.536 0743	8.539 7332	51
10	8.521 1856	8.524 9717	8.528 7250	8.532 4461	8.536 1356	8.539 7939	50
11	8.521 2490	8.525 0345	8.528 7873	8.532 5079	8.536 1968	8.539 8546	49
12	8.521 3123	8.525 0973	8.528 8495	8.532 5696	8.536 2580	8.539 9153	48
13	8.521 3757	8.525 1601	8.528 9118	8.532 6313	8.536 3192	8.539 9760	47
14	8.521 4390	8.525 2229	8.528 9741	8.532 6931	8.536 3804	8.540 0367	46
15	8.521 5024	8.525 2857	8.529 0363	8.532 7548	8.536 4416	8.540 0974	45
16	8.521 5657	8.525 3485	8.529 0985	8.532 8165	8.536 5028	8.540 1581	44
17	8.521 6290	8.525 4112	8.529 1608	8.532 8782	8.536 5640	8.540 2187	43
18	8.521 6923	8.525 4740	8.529 2230	8.532 9399	8.536 6251	8.540 2794	42
19	8.521 7556	8.525 5367	8.529 2852	8.533 0015	8.536 6863	8.540 3400	41
20	8.521 8189	8.525 5995	8.529 3474	8.533 0632	8.536 7474	8.540 4007	40
21	8.521 8822	8.525 6622	8.529 4096	8.533 1249	8.536 8086	8.540 4613	39
22	8.521 9455	8.525 7249	8.529 4718	8.533 1865	8.536 8697	8.540 5219	38
23	8.522 0087	8.525 7877	8.529 5339	8.533 2482	8.536 9308	8.540 5825	37
24	8.522 0720	8.525 8504	8.529 5961	8.533 3098	8.536 9920	8.540 6431	36
25	8.522 1352	8.525 9131	8.529 6583	8.533 3714	8.537 0531	8.540 7037	35
26	8.522 1985	8.525 9757	8.529 7204	8.533 4330	8.537 1142	8.540 7643	34
27	8.522 2617	8.526 0384	8.529 7826	8.533 4946	8.537 1752	8.540 8249	33
28	8.522 3249	8.526 1011	8.529 8447	8.533 5562	8.537 2363	8.540 8854	32
29	8.522 3881	8.526 1637	8.529 9068	8.533 6178	8.537 2974	8.540 9460	31
30	8.522 4513	8.526 2264	8.529 9689	8.533 6794	8.537 3585	8.541 0066	30
31	8.522 5145	8.526 2890	8.530 0310	8.533 7410	8.537 4195	8.541 0671	29
32	8.522 5777	8.526 3517	8.530 0931	8.533 8026	8.537 4806	8.541 1276	28
33	8.522 6408	8.526 4143	8.530 1552	8.533 8641	8.537 5416	8.541 1882	27
34	8.522 7040	8.526 4769	8.530 2173	8.533 9257	8.537 6026	8.541 2487	26
35	8.522 7672	8.526 5395	8.530 2793	8.533 9872	8.537 6636	8.541 3092	25
36	8.522 8303	8.526 6021	8.530 3414	8.534 0487	8.537 7247	8.541 3697	24
37	8.522 8934	8.526 6647	8.530 4034	8.534 1103	8.537 7857	8.541 4302	23
38	8.522 9566	8.526 7273	8.530 4655	8.534 1718	8.537 8466	8.541 4907	22
39	8.523 0197	8.526 7898	8.530 5275	8.534 2333	8.537 9076	8.541 5511	21
40	8.523 0828	8.526 8524	8.530 5895	8.534 2948	8.537 9686	8.541 6116	20
41	8.523 1459	8.526 9149	8.530 6516	8.534 3563	8.538 0296	8.541 6721	19
42	8.523 2090	8.526 9775	8.530 7136	8.534 4177	8.538 0905	8.541 7325	18
43	8.523 2720	8.527 0400	8.530 7756	8.534 4792	8.538 1515	8.541 7929	17
44	8.523 3351	8.527 1025	8.530 8375	8.534 5407	8.538 2124	8.541 8534	16
45	8.523 3982	8.527 1651	8.530 8995	8.534 6021	8.538 2734	8.541 9138	15
46	8.523 4612	8.527 2276	8.530 9615	8.534 6636	8.538 3343	8.541 9742	14
47	8.523 5243	8.527 2901	8.531 0235	8.534 7250	8.538 3952	8.542 0346	13
48	8.523 5873	8.527 3525	8.531 0854	8.534 7864	8.538 4561	8.542 0950	12
49	8.523 6503	8.527 4150	8.531 1473	8.534 8478	8.538 5170	8.542 1554	11
50	8.523 7133	8.527 4775	8.531 2093	8.534 9092	8.538 5779	8.542 2158	10
51	8.523 7763	8.527 5400	8.531 2712	8.534 9706	8.538 6388	8.542 2762	9
52	8.523 8393	8.527 6024	8.531 3331	8.535 0320	8.538 6997	8.542 3365	8
53	8.523 9023	8.527 6648	8.531 3950	8.535 0934	8.538 7605	8.542 3969	7
54	8.523 9653	8.527 7273	8.531 4569	8.535 1548	8.538 8214	8.542 4572	6
55	8.524 0283	8.527 7897	8.531 5188	8.535 2161	8.538 8822	8.542 5176	5
56	8.524 0912	8.527 8521	8.531 5807	8.535 2775	8.538 9431	8.542 5779	4
57	8.524 1542	8.527 9145	8.531 6426	8.535 3389	8.539 0039	8.542 6382	3
58	8.524 2171	8.527 9769	8.531 7044	8.535 4002	8.539 0647	8.542 6986	2
59	8.524 2800	8.528 0393	8.531 7663	8.535 4615	8.539 1255	8.542 7589	1
60	8.524 3430	8.528 1017	8.531 8281	8.535 5228	8.539 1863	8.542 8192	0
″	5′	4′	3′	2′	1′	0′	″

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0	8.520 7902	8.524 5860	8.528 3490	8.532 0797	8.535 7787	8.539 4466	60
1	8.520 8537	8.524 6490	8.528 4114	8.532 1416	8.535 8401	8.539 5075	59
2	8.520 9173	8.524 7120	8.528 4739	8.532 2035	8.535 9015	8.539 5683	58
3	8.520 9808	8.524 7749	8.528 5363	8.532 2654	8.535 9629	8.539 6292	57
4	8.521 0443	8.524 8379	8.528 5987	8.532 3273	8.536 0242	8.539 6900	56
5	8.521 1078	8.524 9008	8.528 6611	8.532 3892	8.536 0856	8.539 7509	55
6	8.521 1713	8.524 9638	8.528 7235	8.532 4510	8.536 1469	8.539 8117	54
7	8.521 2348	8.525 0267	8.528 7859	8.532 5129	8.536 2082	8.539 8725	53
8	8.521 2982	8.525 0896	8.528 8483	8.532 5747	8.536 2696	8.539 9333	52
9	8.521 3617	8.525 1525	8.528 9106	8.532 6366	8.536 3309	8.539 9941	51
10	8.521 4251	8.525 2154	8.528 9730	8.532 6984	8.536 3922	8.540 0549	50
11	8.521 4886	8.525 2783	8.529 0353	8.532 7602	8.536 4535	8.540 1157	49
12	8.521 5520	8.525 3412	8.529 0977	8.532 8220	8.536 5148	8.540 1765	48
13	8.521 6154	8.525 4041	8.529 1600	8.532 8838	8.536 5761	8.540 2372	47
14	8.521 6789	8.525 4669	8.529 2223	8.532 9456	8.536 6373	8.540 2980	46
15	8.521 7423	8.525 5298	8.529 2847	8.533 0074	8.536 6986	8.540 3587	45
16	8.521 8057	8.525 5926	8.529 3470	8.533 0692	8.536 7599	8.540 4195	44
17	8.521 8690	8.525 6555	8.529 4093	8.533 1310	8.536 8211	8.540 4802	43
18	8.521 9324	8.525 7183	8.529 4716	8.533 1927	8.536 8823	8.540 5409	42
19	8.521 9958	8.525 7811	8.529 5338	8.533 2545	8.536 9436	8.540 6017	41
20	8.522 0591	8.525 8439	8.529 5961	8.533 3162	8.537 0048	8.540 6624	40
21	8.522 1225	8.525 9067	8.529 6584	8.533 3779	8.537 0660	8.540 7231	39
22	8.522 1858	8.525 9695	8.529 7206	8.533 4397	8.537 1272	8.540 7838	38
23	8.522 2492	8.526 0323	8.529 7829	8.533 5014	8.537 1884	8.540 8445	37
24	8.522 3125	8.526 0951	8.529 8451	8.533 5631	8.537 2496	8.540 9051	36
25	8.522 3758	8.526 1579	8.529 9073	8.533 6248	8.537 3108	8.540 9658	35
26	8.522 4391	8.526 2206	8.529 9696	8.533 6865	8.537 3719	8.541 0264	34
27	8.522 5024	8.526 2834	8.530 0318	8.533 7482	8.537 4331	8.541 0871	33
28	8.522 5657	8.526 3461	8.530 0940	8.533 8098	8.537 4942	8.541 1477	32
29	8.522 6290	8.526 4088	8.530 1562	8.533 8715	8.537 5554	8.541 2084	31
30	8.522 6922	8.526 4716	8.530 2183	8.533 9331	8.537 6165	8.541 2690	30
31	8.522 7555	8.526 5343	8.530 2805	8.533 9948	8.537 6777	8.541 3296	29
32	8.522 8187	8.526 5970	8.530 3427	8.534 0564	8.537 7388	8.541 3902	28
33	8.522 8820	8.526 6597	8.530 4048	8.534 1181	8.537 7999	8.541 4508	27
34	8.522 9452	8.526 7223	8.530 4670	8.534 1797	8.537 8610	8.541 5114	26
35	8.523 0084	8.526 7850	8.530 5291	8.534 2413	8.537 9221	8.541 5720	25
36	8.523 0717	8.526 8477	8.530 5912	8.534 3029	8.537 9832	8.541 6326	24
37	8.523 1349	8.526 9103	8.530 6534	8.534 3645	8.538 0442	8.541 6931	23
38	8.523 1980	8.526 9730	8.530 7155	8.534 4261	8.538 1053	8.541 7537	22
39	8.523 2612	8.527 0356	8.530 7776	8.534 4876	8.538 1664	8.541 8142	21
40	8.523 3244	8.527 0983	8.530 8397	8.534 5492	8.538 2274	8.541 8748	20
41	8.523 3876	8.527 1609	8.530 9018	8.534 6108	8.538 2884	8.541 9353	19
42	8.523 4507	8.527 2235	8.530 9638	8.534 6723	8.538 3495	8.541 9958	18
43	8.523 5139	8.527 2861	8.531 0259	8.534 7339	8.538 4105	8.542 0563	17
44	8.523 5770	8.527 3487	8.531 0880	8.534 7954	8.538 4715	8.542 1168	16
45	8.523 6401	8.527 4113	8.531 1500	8.534 8569	8.538 5325	8.542 1773	15
46	8.523 7033	8.527 4739	8.531 2121	8.534 9184	8.538 5935	8.542 2378	14
47	8.523 7664	8.527 5364	8.531 2741	8.534 9799	8.538 6545	8.542 2983	13
48	8.523 8295	8.527 5990	8.531 3361	8.535 0414	8.538 7155	8.542 3588	12
49	8.523 8926	8.527 6615	8.531 3981	8.535 1029	8.538 7765	8.542 4193	11
50	8.523 9557	8.527 7241	8.531 4601	8.535 1644	8.538 8374	8.542 4797	10
51	8.524 0187	8.527 7866	8.531 5221	8.535 2259	8.538 8984	8.542 5402	9
52	8.524 0818	8.527 8491	8.531 5841	8.535 2873	8.538 9593	8.542 6006	8
53	8.524 1449	8.527 9116	8.531 6461	8.535 3488	8.539 0203	8.542 6610	7
54	8.524 2079	8.527 9741	8.531 7081	8.535 4102	8.539 0812	8.542 7214	6
55	8.524 2709	8.528 0366	8.531 7700	8.535 4717	8.539 1421	8.542 7819	5
56	8.524 3340	8.528 0991	8.531 8320	8.535 5331	8.539 2030	8.542 8423	4
57	8.524 3970	8.528 1616	8.531 8939	8.535 5945	8.539 2639	8.542 9027	3
58	8.524 4600	8.528 2241	8.531 9559	8.535 6559	8.539 3248	8.542 9631	2
59	8.524 5230	8.528 2865	8.532 0178	8.535 7173	8.539 3857	8.543 0234	1
60	8.524 5860	8.528 3490	8.532 0797	8.535 7787	8.539 4466	8.543 0838	0
″	5′	4′	3′	2′	1′	0′	″

sin 2°

″	0′	1′	2′	3′	4′	5′	″
0	8.542 8192	8.546 4218	8.549 9948	8.553 5386	8.557 0536	8.560 5404	60
1	8.542 8795	8.546 4816	8.550 0541	8.553 5974	8.557 1120	8.560 5983	59
2	8.542 9397	8.546 5414	8.550 1134	8.553 6562	8.557 1703	8.560 6562	58
3	8.543 0000	8.546 6012	8.550 1727	8.553 7150	8.557 2286	8.560 7140	57
4	8.543 0603	8.546 6609	8.550 2319	8.553 7738	8.557 2870	8.560 7719	56
5	8.543 1205	8.546 7207	8.550 2912	8.553 8326	8.557 3453	8.560 8297	55
6	8.543 1808	8.546 7804	8.550 3505	8.553 8914	8.557 4036	8.560 8876	54
7	8.543 2410	8.546 8402	8.550 4097	8.553 9501	8.557 4619	8.560 9454	53
8	8.543 3012	8.546 8999	8.550 4690	8.554 0089	8.557 5202	8.561 0032	52
9	8.543 3615	8.546 9596	8.550 5282	8.554 0676	8.557 5784	8.561 0610	51
10	8.543 4217	8.547 0194	8.550 5874	8.554 1264	8.557 6367	8.561 1188	50
11	8.543 4819	8.547 0791	8.550 6466	8.554 1851	8.557 6950	8.561 1766	49
12	8.543 5421	8.547 1388	8.550 7059	8.554 2439	8.557 7532	8.561 2344	48
13	8.543 6023	8.547 1985	8.550 7651	8.554 3026	8.557 8115	8.561 2922	47
14	8.543 6625	8.547 2581	8.550 8243	8.554 3613	8.557 8697	8.561 3500	46
15	8.543 7226	8.547 3178	8.550 8834	8.554 4200	8.557 9280	8.561 4078	45
16	8.543 7828	8.547 3775	8.550 9426	8.554 4787	8.557 9862	8.561 4655	44
17	8.543 8430	8.547 4371	8.551 0018	8.554 5374	8.558 0444	8.561 5233	43
18	8.543 9031	8.547 4968	8.551 0610	8.554 5961	8.558 1026	8.561 5810	42
19	8.543 9632	8.547 5564	8.551 1201	8.554 6548	8.558 1608	8.561 6388	41
20	8.544 0234	8.547 6161	8.551 1793	8.554 7134	8.558 2190	8.561 6965	40
21	8.544 0835	8.547 6757	8.551 2384	8.554 7721	8.558 2772	8.561 7542	39
22	8.544 1436	8.547 7353	8.551 2975	8.554 8307	8.558 3354	8.561 8119	38
23	8.544 2037	8.547 7949	8.551 3567	8.554 8894	8.558 3935	8.561 8696	37
24	8.544 2638	8.547 8545	8.551 4158	8.554 9480	8.558 4517	8.561 9273	36
25	8.544 3239	8.547 9141	8.551 4749	8.555 0066	8.558 5099	8.561 9850	35
26	8.544 3840	8.547 9737	8.551 5340	8.555 0653	8.558 5680	8.562 0427	34
27	8.544 4441	8.548 0333	8.551 5931	8.555 1239	8.558 6262	8.562 1004	33
28	8.544 5041	8.548 0929	8.551 6522	8.555 1825	8.558 6843	8.562 1581	32
29	8 544 5642	8.548 1524	8.551 7112	8.555 2411	8.558 7424	8.562 2157	31
30	8.544 6242	8.548 2120	8.551 7703	8.555 2997	8.558 8005	8.562 2734	30
31	8.544 6843	8.548 2715	8.551 8294	8.555 3582	8.558 8586	8.562 3310	29
32	8.544 7443	8.548 3311	8.551 8884	8.555 4168	8.558 9167	8.562 3887	28
33	8.544 8043	8.548 3906	8.551 9474	8.555 4754	8.558 9748	8.562 4463	27
34	8.544 8643	8.548 4501	8.552 0065	8.555 5339	8.559 0329	8.562 5039	26
35	8.544 9243	8.548 5096	8.552 0655	8.555 5925	8.559 0910	8.562 5615	25
36	8.544 9843	8.548 5691	8.552 1245	8.555 6510	8.559 1491	8.562 6191	24
37	8.545 0443	8.548 6286	8.552 1835	8.555 7095	8.559 2071	8.562 6767	23
38	8.545 1043	8.548 6881	8.552 2425	8.555 7681	8.559 2652	8.562 7343	22
39	8.545 1643	8.548 7476	8.552 3015	8.555 8266	8.559 3232	8.562 7919	21
40	8.545 2243	8.548 8071	8.552 3605	8.555 8851	8.559 3813	8.562 8495	20
41	8.545 2842	8.548 8665	8.552 4195	8.555 9436	8.559 4393	8.562 9071	19
42	8.545 3442	8.548 9260	8.552 4785	8.556 0021	8.559 4973	8.562 9646	18
43	8.545 4041	8.548 9854	8.552 5374	8.556 0606	8.559 5553	8.563 0222	17
44	8.545 4640	8.549 0449	8.552 5964	8.556 1191	8.559 6134	8.563 0797	16
45	8.545 5240	8.549 1043	8.552 6553	8.556 1775	8.559 6714	8.563 1373	15
46	8.545 5839	8.549 1637	8.552 7143	8.556 2360	8.559 7293	8.563 1948	14
47	8.545 6438	8.549 2231	8.552 7732	8.556 2944	8.559 7873	8.563 2523	13
48	8.545 7037	8.549 2825	8.552 8321	8.556 3529	8.559 8453	8.563 3098	12
49	8.545 7636	8.549 3419	8.552 8910	8.556 4113	8.559 9033	8.563 3673	11
50	8.545 8234	8.549 4013	8.552 9499	8.556 4698	8.559 9612	8.563 4248	10
51	8.545 8833	8.549 4607	8.553 0088	8.556 5282	8.560 0192	8.563 4823	9
52	8.545 9432	8.549 5201	8.553 0677	8.556 5866	8.560 0771	8.563 5398	8
53	8.546 0030	8.549 5795	8.553 1266	8.556 6450	8.560 1351	8.563 5973	7
54	8.546 0629	8.549 6388	8.553 1855	8.556 7034	8.560 1930	8.563 6548	6
55	8.546 1227	8.549 6982	8.553 2444	8.556 7618	8.560 2509	8.563 7122	5
56	8.546 1826	8.549 7575	8.553 3032	8.556 8202	8.560 3088	8.563 7697	4
57	8.546 2424	8.549 8168	8.553 3621	8.556 8785	8.560 3668	8.563 8271	3
58	8.546 3022	8.549 8762	8.553 4209	8.556 9369	8.560 4247	8.563 8846	2
59	8.546 3620	8.549 9355	8.553 4797	8.556 9953	8.560 4825	8.563 9420	1
60	8.546 4218	8.549 9948	8.553 5386	8.557 0536	8.560 5404	8.563 9994	0
″	59′	58′	57′	56′	55′	54′	″

cos 87°

tang 2°

″	0′	1′	2′	3′	4′	5′	″
0	8.543 0838	8.546 6909	8.550 2683	8.553 8166	8.557 3362	8.560 8276	60
1	8.543 1442	8.546 7507	8.550 3277	8.553 8755	8.557 3946	8.560 8855	59
2	8.543 2045	8.546 8106	8.550 3871	8.553 9344	8.557 4530	8.560 9435	58
3	8.543 2649	8.546 8705	8.550 4464	8.553 9933	8.557 5114	8.561 0014	57
4	8.543 3252	8.546 9303	8.550 5058	8.554 0521	8.557 5698	8.561 0594	56
5	8.543 3855	8.546 9901	8.550 5651	8.554 1110	8.557 6282	8.561 1173	55
6	8.543 4459	8.547 0500	8.550 6245	8.554 1698	8.557 6866	8.561 1752	54
7	8.543 5062	8.547 1098	8.550 6838	8.554 2287	8.557 7450	8.561 2331	53
8	8.543 5665	8.547 1696	8.550 7431	8.554 2875	8.557 8033	8.561 2910	52
9	8.543 6268	8.547 2294	8.550 8024	8.554 3464	8.557 8617	8.561 3489	51
10	8.543 6871	8.547 2892	8.550 8617	8.554 4052	8.557 9201	8.561 4068	50
11	8.543 7473	8.547 3490	8.550 9210	8.554 4640	8.557 9784	8.561 4646	49
12	8.543 8076	8.547 4087	8.550 9803	8.554 5228	8.558 0367	8.561 5225	48
13	8.543 8679	8.547 4685	8.551 0396	8.554 5816	8.558 0951	8.561 5804	47
14	8.543 9281	8.547 5283	8.551 0988	8.554 6404	8.558 1534	8.561 6382	46
15	8.543 9884	8.547 5880	8.551 1581	8.554 6992	8.558 2117	8.561 6961	45
16	8.544 0486	8.547 6477	8.551 2174	8.554 7580	8.558 2700	8.561 7539	44
17	8.544 1088	8.547 7075	8.551 2766	8.554 8167	8.558 3283	8.561 8117	43
18	8.544 1691	8.547 7672	8.551 3358	8.554 8755	8.558 3866	8.561 8696	42
19	8.544 2293	8.547 8269	8.551 3951	8.554 9342	8.558 4448	8.561 9274	41
20	8.544 2895	8.547 8866	8.551 4543	8.554 9930	8.558 5031	8.561 9852	40
21	8.544 3497	8.547 9463	8.551 5135	8.555 0517	8.558 5614	8.562 0430	39
22	8.544 4099	8.548 0060	8.551 5727	8.555 1104	8.558 6196	8.562 1008	38
23	8.544 4701	8.548 0657	8.551 6319	8.555 1692	8.558 6779	8.562 1586	37
24	8.544 5302	8.548 1254	8.551 6911	8.555 2279	8.558 7361	8.562 2163	36
25	8.544 5904	8.548 1851	8.551 7503	8.555 2866	8.558 7944	8.562 2741	35
26	8.544 6505	8.548 2447	8.551 8095	8.555 3453	8.558 8526	8.562 3319	34
27	8.544 7107	8.548 3044	8.551 8686	8.555 4039	8.558 9108	8.562 3896	33
28	8.544 7708	8.548 3640	8.551 9278	8.555 4626	8.558 9690	8.562 4474	32
29	8.544 8310	8.548 4236	8.551 9869	8.555 5213	8.559 0272	8.562 5051	31
30	8.544 8911	8.548 4833	8.552 0461	8.555 5800	8.559 0854	8.562 5628	30
31	8.544 9512	8.548 5429	8.552 1052	8.555 6386	8.559 1436	8.562 6206	29
32	8.545 0113	8.548 6025	8.552 1643	8.555 6973	8.559 2018	8.562 6783	28
33	8.545 0714	8.548 6621	8.552 2235	8.555 7559	8.559 2599	8.562 7360	27
34	8.545 1315	8.548 7217	8.552 2826	8.555 8145	8.559 3181	8.562 7937	26
35	8.545 1916	8.548 7813	8.552 3417	8.555 8732	8.559 3762	8.562 8514	25
36	8.545 2516	8.548 8409	8.552 4008	8.555 9318	8.559 4344	8.562 9091	24
37	8.545 3117	8.548 9004	8.552 4598	8.555 9904	8.559 4925	8.562 9667	23
38	8.545 3718	8.548 9600	8.552 5189	8.556 0490	8.559 5507	8.563 0244	22
39	8.545 4318	8.549 0196	8.552 5780	8.556 1076	8.559 6088	8.563 0821	21
40	8.545 4918	8.549 0791	8.552 6371	8.556 1662	8.559 6669	8.563 1397	20
41	8.545 5519	8.549 1386	8.552 6961	8.556 2247	8.559 7250	8.563 1974	19
42	8.545 6119	8.549 1982	8.552 7552	8.556 2833	8.559 7831	8.563 2550	18
43	8.545 6719	8.549 2577	8.552 8142	8.556 3419	8.559 8412	8.563 3126	17
44	8.545 7319	8.549 3172	8.552 8732	8.556 4004	8.559 8993	8.563 3703	16
45	8.545 7919	8.549 3767	8.552 9322	8.556 4590	8.559 9574	8.563 4279	15
46	8.545 8519	8.549 4362	8.552 9913	8.556 5175	8.560 0154	8.563 4855	14
47	8.545 9119	8.549 4957	8.553 0503	8.556 5760	8.560 0735	8.563 5431	13
48	8.545 9719	8.549 5552	8.553 1093	8.556 6346	8.560 1315	8.563 6007	12
49	8.546 0318	8.549 6147	8.553 1682	8.556 6931	8.560 1896	8.563 6583	11
50	8.546 0918	8.549 6741	8.553 2272	8.556 7516	8.560 2476	8.563 7158	10
51	8.546 1517	8.549 7336	8.553 2862	8.556 8101	8.560 3057	8.563 7734	9
52	8.546 2117	8.549 7930	8.553 3452	8.556 8686	8.560 3637	8.563 8310	8
53	8.546 2716	8.549 8525	8.553 4041	8.556 9270	8.560 4217	8.563 8885	7
54	8.546 3315	8.549 9119	8.553 4631	8.556 9855	8.560 4797	8.563 9461	6
55	8.546 3914	8.549 9713	8.553 5220	8.557 0440	8.560 5377	8.564 0036	5
56	8.546 4513	8.550 0307	8.553 5810	8.557 1024	8.560 5957	8.564 0611	4
57	8.546 5112	8.550 0901	8.553 6399	8.557 1609	8.560 6537	8.564 1187	3
58	8.546 5711	8.550 1495	8.553 6988	8.557 2193	8.560 7117	8.564 1762	2
59	8.546 6310	8.550 2089	8.553 7577	8.557 2778	8.560 7696	8.564 2337	1
60	8.546 6909	8.550 2683	8.553 8166	8.557 3362	8.560 8276	8.564 2912	0
″	59′	58′	57′	56′	55′	54′	″

cotg 87°

sin 2°

″	6′	7′	8′	9′	10′	11′	″
0	8.563 9994	8.567 4310	8.570 8357	8.574 2139	8.577 5660	8.580 8923	60
1	8.564 0568	8.567 4880	8.570 8923	8.574 2700	8.577 6216	8.580 9475	59
2	8.564 1142	8.567 5450	8.570 9488	8.574 3261	8.577 6772	8.581 0027	58
3	8.564 1716	8.567 6019	8.571 0053	8.574 3821	8.577 7329	8.581 0580	57
4	8.564 2290	8.567 6589	8.571 0618	8.574 4382	8.577 7885	8.581 1132	56
5	8.564 2864	8.567 7158	8.571 1183	8.574 4942	8.577 8441	8.581 1683	55
6	8.564 3438	8.567 7727	8.571 1747	8.574 5503	8.577 8997	8.581 2235	54
7	8.564 4012	8.567 8296	8.571 2312	8.574 6063	8.577 9553	8.581 2787	53
8	8.564 4585	8.567 8866	8.571 2877	8.574 6623	8.578 0109	8.581 3339	52
9	8.564 5159	8.567 9435	8.571 3441	8.574 7184	8.578 0665	8.581 3891	51
10	8.564 5732	8.568 0004	8.571 4006	8.574 7744	8.578 1221	8.581 4442	50
11	8.564 6306	8.568 0572	8.571 4570	8.574 8304	8.578 1777	8.581 4994	49
12	8.564 6879	8.568 1141	8.571 5135	8.574 8864	8.578 2333	8.581 5545	48
13	8.564 7452	8.568 1710	8.571 5699	8.574 9424	8.578 2888	8.581 6097	47
14	8.564 8026	8.568 2279	8.571 6263	8.574 9984	8.578 3444	8.581 6648	46
15	8.564 8599	8.568 2847	8.571 6827	8.575 0543	8.578 3999	8.581 7199	45
16	8.564 9172	8.568 3416	8.571 7392	8.575 1103	8.578 4555	8.581 7750	44
17	8.564 9745	8.568 3984	8.571 7956	8.575 1663	8.578 5110	8.581 8301	43
18	8.565 0318	8.568 4553	8.571 8520	8.575 2222	8.578 5665	8.581 8853	42
19	8.565 0890	8.568 5121	8.571 9083	8.575 2782	8.578 6221	8.581 9403	41
20	8.565 1463	8.568 5689	8.571 9647	8.575 3341	8.578 6776	8.581 9954	40
21	8.565 2036	8.568 6257	8.572 0211	8.575 3901	8.578 7331	8.582 0505	39
22	8.565 2608	8.568 6825	8.572 0775	8.575 4460	8.578 7886	8.582 1056	38
23	8.565 3181	8.568 7393	8.572 1338	8.575 5019	8.578 8441	8.582 1607	37
24	8.565 3753	8.568 7961	8.572 1902	8.575 5578	8.578 8996	8.582 2157	36
25	8.565 4326	8.568 8529	8.572 2465	8.575 6137	8.578 9550	8.582 2708	35
26	8.565 4898	8.568 9097	8.572 3028	8.575 6696	8.579 0105	8.582 3258	34
27	8.565 5470	8.568 9665	8.572 3592	8.575 7255	8.579 0660	8.582 3809	33
28	8.565 6042	8.569 0232	8.572 4155	8.575 7814	8.579 1214	8.582 4359	32
29	8.565 6614	8.569 0800	8.572 4718	8.575 8373	8.579 1769	8.582 4909	31
30	8.565 7186	8.569 1367	8.572 5281	8.575 8932	8.579 2323	8.582 5460	30
31	8.565 7758	8.569 1935	8.572 5844	8.575 9490	8.579 2878	8.582 6010	29
32	8.565 8330	8.569 2502	8.572 6407	8.576 0049	8.579 3432	8.582 6560	28
33	8.565 8902	8.569 3069	8.572 6970	8.576 0607	8.579 3986	8.582 7110	27
34	8.565 9473	8.569 3637	8.572 7533	8.576 1166	8.579 4540	8.582 7660	26
35	8.566 0045	8.569 4204	8.572 8095	8.576 1724	8.579 5094	8.582 8210	25
36	8.566 0617	8.569 4771	8.572 8658	8.576 2282	8.579 5648	8.582 8759	24
37	8.566 1188	8.569 5338	8.572 9220	8.576 2841	8.579 6202	8.582 9309	23
38	8.566 1759	8.569 5905	8.572 9783	8.576 3399	8.579 6756	8.582 9859	22
39	8.566 2331	8.569 6471	8.573 0345	8.576 3957	8.579 7310	8.583 0408	21
40	8.566 2902	8.569 7038	8.573 0908	8.576 4515	8.579 7864	8.583 0958	20
41	8.566 3473	8.569 7605	8.573 1470	8.576 5073	8.579 8417	8.583 1507	19
42	8.566 4044	8.569 8171	8.573 2032	8.576 5631	8.579 8971	8.583 2057	18
43	8.566 4615	8.569 8738	8.573 2594	8.576 6188	8.579 9524	8.583 2606	17
44	8.566 5186	8.569 9304	8.573 3156	8.576 6746	8.580 0078	8.583 3155	16
45	8.566 5757	8.569 9871	8.573 3718	8.576 7304	8.580 0631	8.583 3704	15
46	8.566 6328	8.570 0437	8.573 4280	8.576 7861	8.580 1184	8.583 4253	14
47	8.566 6898	8.570 1003	8.573 4842	8.576 8419	8.580 1738	8.583 4802	13
48	8.566 7469	8.570 1569	8.573 5404	8.576 8976	8.580 2291	8.583 5351	12
49	8.566 8039	8.570 2135	8.573 5965	8.576 9533	8.580 2844	8.583 5900	11
50	8.566 8610	8.570 2701	8.573 6527	8.577 0091	8.580 3397	8.583 6449	10
51	8.566 9180	8.570 3267	8.573 7089	8.577 0648	8.580 3950	8.583 6998	9
52	8.566 9751	8.570 3833	8.573 7650	8.577 1205	8.580 4503	8.583 7546	8
53	8.567 0321	8.570 4399	8.573 8211	8.577 1762	8.580 5055	8.583 8095	7
54	8.567 0891	8.570 4965	8.573 8773	8.577 2319	8.580 5608	8.583 8644	6
55	8.567 1461	8.570 5530	8.573 9334	8.577 2876	8.580 6161	8.583 9192	5
56	8.567 2031	8.570 6096	8.573 9895	8.577 3433	8.580 6713	8.583 9740	4
57	8.567 2601	8.570 6661	8.574 0456	8.577 3990	8.580 7266	8.584 0289	3
58	8.567 3171	8.570 7227	8.574 1017	8.577 4546	8.580 7818	8.584 0837	2
59	8.567 3741	8.570 7792	8.574 1578	8.577 5103	8.580 8371	8.584 1385	1
60	8.567 4310	8.570 8357	8.574 2139	8.577 5660	8.580 8923	8.584 1933	0
″	53′	52′	51′	50′	49′	48′	″

cos 87°

tang 2°

″	6′	7′	8′	9′	10′	11′	″
0	8.564 2912	8.567 7275	8.571 1368	8.574 5197	8.577 8766	8.581 2077	60
1	8.564 3487	8.567 7845	8.571 1934	8.574 5759	8.577 9323	8.581 2630	59
2	8.564 4062	8.567 8415	8.571 2500	8.574 6320	8.577 9880	8.581 3183	58
3	8.564 4637	8.567 8986	8.571 3066	8.574 6882	8.578 0437	8.581 3736	57
4	8.564 5211	8.567 9556	8.571 3632	8.574 7443	8.578 0994	8.581 4289	56
5	8.564 5786	8.568 0126	8.571 4198	8.574 8005	8.578 1551	8.581 4841	55
6	8.564 6360	8.568 0696	8.571 4763	8.574 8566	8.578 2108	8.581 5394	54
7	8.564 6935	8.568 1266	8.571 5329	8.574 9127	8.578 2665	8.581 5947	53
8	8.564 7509	8.568 1836	8.571 5894	8.574 9688	8.578 3222	8.581 6499	52
9	8.564 8084	8.568 2406	8.571 6460	8.575 0249	8.578 3779	8.581 7052	51
10	8.564 8658	8.568 2976	8.571 7025	8.575 0810	8.578 4335	8.581 7604	50
11	8.564 9232	8.568 3545	8.571 7590	8.575 1371	8.578 4892	8.581 8157	49
12	8.564 9806	8.568 4115	8.571 8155	8.575 1932	8.578 5448	8.581 8709	48
13	8.565 0380	8.568 4684	8.571 8720	8.575 2492	8.578 6005	8.581 9261	47
14	8.565 0954	8.568 5254	8.571 9285	8.575 3053	8.578 6561	8.581 9813	46
15	8.565 1528	8.568 5823	8.571 9850	8.575 3614	8.578 7117	8.582 0365	45
16	8.565 2102	8.568 6393	8.572 0415	8.575 4174	8.578 7674	8.582 0917	44
17	8.565 2676	8.568 6962	8.572 0980	8.575 4735	8.578 8230	8.582 1469	43
18	8.565 3249	8.568 7531	8.572 1545	8.575 5295	8.578 8786	8.582 2021	42
19	8.565 3823	8.568 8100	8.572 2109	8.575 5855	8.578 9342	8.582 2573	41
20	8.565 4396	8.568 8669	8.572 2674	8.575 6416	8.578 9898	8.582 3124	40
21	8.565 4970	8.568 9238	8.572 3238	8.575 6976	8.579 0454	8.582 3676	39
22	8.565 5543	8.568 9807	8.572 3803	8.575 7536	8.579 1009	8.582 4228	38
23	8.565 6116	8.569 0376	8.572 4367	8.575 8096	8.579 1565	8.582 4779	37
24	8.565 6690	8.569 0944	8.572 4932	8.575 8656	8.579 2121	8.582 5331	36
25	8.565 7263	8.569 1513	8.572 5496	8.575 9216	8.579 2676	8.582 5882	35
26	8.565 7836	8.569 2081	8.572 6060	8.575 9775	8.579 3232	8.582 6433	34
27	8.565 8409	8.569 2650	8.572 6624	8.576 0335	8.579 3787	8.582 6984	33
28	8.565 8982	8.569 3218	8.572 7188	8.576 0895	8.579 4343	8.582 7536	32
29	8.565 9554	8.569 3787	8.572 7752	8.576 1454	8.579 4898	8.582 8087	31
30	8.566 0127	8.569 4355	8.572 8316	8.576 2014	8.579 5453	8.582 8638	30
31	8.566 0700	8.569 4923	8.572 8880	8.576 2573	8.579 6008	8.582 9189	29
32	8.566 1272	8.569 5491	8.572 9443	8.576 3133	8.579 6563	8.582 9739	28
33	8.566 1845	8.569 6059	8.573 0007	8.576 3692	8.579 7118	8.583 0290	27
34	8.566 2417	8.569 6627	8.573 0570	8.576 4251	8.579 7673	8.583 0841	26
35	8.566 2990	8.569 7195	8.573 1134	8.576 4810	8.579 8228	8.583 1392	25
36	8.566 3562	8.569 7763	8.573 1697	8.576 5369	8.579 8783	8.583 1942	24
37	8.566 4134	8.569 8331	8.573 2261	8.576 5928	8.579 9338	8.583 2493	23
38	8.566 4706	8.569 8898	8.573 2824	8.576 6487	8.579 9892	8.583 3043	22
39	8.566 5279	8.569 9466	8.573 3387	8.576 7046	8.580 0447	8.583 3594	21
40	8.566 5851	8.570 0034	8.573 3950	8.576 7605	8.580 1001	8.583 4144	20
41	8.566 6422	8.570 0601	8.573 4513	8.576 8164	8.580 1556	8.583 4694	19
42	8.566 6994	8.570 1168	8.573 5076	8.576 8722	8.580 2110	8.583 5244	18
43	8.566 7566	8.570 1736	8.573 5639	8.576 9281	8.580 2665	8.583 5794	17
44	8.566 8138	8.570 2303	8.573 6202	8.576 9839	8.580 3219	8.583 6344	16
45	8.566 8709	8.570 2870	8.573 6765	8.577 0398	8.580 3773	8.583 6894	15
46	8.566 9281	8.570 3437	8.573 7327	8.577 0956	8.580 4327	8.583 7444	14
47	8.566 9852	8.570 4004	8.573 7890	8.577 1514	8.580 4881	8.583 7994	13
48	8.567 0424	8.570 4571	8.573 8453	8.577 2073	8.580 5435	8.583 8544	12
49	8.567 0995	8.570 5138	8.573 9015	8.577 2631	8.580 5989	8.583 9094	11
50	8.567 1566	8.570 5705	8.573 9577	8.577 3189	8.580 6543	8.583 9643	10
51	8.567 2138	8.570 6271	8.574 0140	8.577 3747	8.580 7096	8.584 0193	9
52	8.567 2709	8.570 6838	8.574 0702	8.577 4305	8.580 7650	8.584 0742	8
53	8.567 3280	8.570 7405	8.574 1264	8.577 4863	8.580 8204	8.584 1292	7
54	8.567 3851	8.570 7971	8.574 1826	8.577 5420	8.580 8757	8.584 1841	6
55	8.567 4421	8.570 8537	8.574 2388	8.577 5978	8.580 9311	8.584 2390	5
56	8.567 4992	8.570 9104	8.574 2950	8.577 6536	8.580 9864	8.584 2939	4
57	8.567 5563	8.570 9670	8.574 3512	8.577 7093	8.581 0417	8.584 3489	3
58	8.567 6134	8.571 0236	8.574 4074	8.577 7651	8.581 0971	8.584 4038	2
59	8.567 6704	8.571 0802	8.574 4636	8.577 8208	8.581 1524	8.584 4587	1
60	8.567 7275	8.571 1368	8.574 5197	8.577 8766	8.581 2077	8.584 5136	0
″	53′	52′	51′	50′	49′	48′	″

cotg 87°

sin 2°

"	12′	13′	14′	15′	16′	17′	"
0	8.584 1933	8.587 4694	8.590 7209	8.593 9483	8.597 1517	8.600 3317	60
1	8.584 2481	8.587 5238	8.590 7749	8.594 0018	8.597 2049	8.600 3845	59
2	8.584 3029	8.587 5782	8.590 8289	8.594 0554	8.597 2581	8.600 4373	58
3	8.584 3577	8.587 6326	8.590 8829	8.594 1090	8.597 3113	8.600 4901	57
4	8.584 4125	8.587 6869	8.590 9368	8.594 1626	8.597 3645	8.600 5429	56
5	8.584 4673	8.587 7413	8.590 9908	8.594 2161	8.597 4176	8.600 5957	55
6	8.584 5221	8.587 7957	8.591 0448	8.594 2697	8.597 4708	8.600 6484	54
7	8.584 5768	8.587 8500	8.591 0987	8.594 3232	8.597 5239	8.600 7012	53
8	8.584 6316	8.587 9044	8.591 1526	8.594 3768	8.597 5771	8.600 7540	52
9	8.584 6863	8.587 9587	8.591 2066	8.594 4303	8.597 6302	8.600 8067	51
10	8.584 7411	8.588 0130	8.591 2605	8.594 4838	8.597 6834	8.600 8595	50
11	8.584 7958	8.588 0674	8.591 3144	8.594 5373	8.597 7365	8.600 9122	49
12	8.584 8505	8.588 1217	8.591 3683	8.594 5908	8.597 7896	8.600 9649	48
13	8.584 9052	8.588 1760	8.591 4222	8.594 6444	8.597 8427	8.601 0177	47
14	8.584 9600	8.588 2303	8.591 4761	8.594 6979	8.597 8958	8.601 0704	46
15	8.585 0147	8.588 2846	8.591 5300	8.594 7513	8.597 9489	8.601 1231	45
16	8.585 0694	8.588 3389	8.591 5839	8.594 8048	8.598 0020	8.601 1758	44
17	8.585 1241	8.588 3932	8.591 6378	8.594 8583	8.598 0551	8.601 2285	43
18	8.585 1788	8.588 4474	8.591 6917	8.594 9118	8.598 1082	8.601 2812	42
19	8.585 2334	8.588 5017	8.591 7455	8.594 9653	8.598 1613	8.601 3339	41
20	8.585 2881	8.588 5560	8.591 7994	8.595 0187	8.598 2143	8.601 3866	40
21	8.585 3428	8.588 6102	8.591 8532	8.595 0722	8.598 2674	8.601 4392	39
22	8.585 3974	8.588 6645	8.591 9071	8.595 1256	8.598 3204	8.601 4919	38
23	8.585 4521	8.588 7187	8.591 9609	8.595 1791	8.598 3735	8.601 5446	37
24	8.585 5067	8.588 7729	8.592 0147	8.595 2325	8.598 4265	8.601 5972	36
25	8.585 5614	8.588 8272	8.592 0686	8.595 2859	8.598 4796	8.601 6499	35
26	8.585 6160	8.588 8814	8.592 1224	8.595 3393	8.598 5326	8.601 7025	34
27	8.585 6706	8.588 9356	8.592 1762	8.595 3928	8.598 5856	8.601 7551	33
28	8.585 7252	8.588 9898	8.592 2300	8.595 4462	8.598 6386	8.601 8078	32
29	8.585 7799	8.589 0440	8.592 2838	8.595 4996	8.598 6916	8.601 8604	31
30	8.585 8345	8.589 0982	8.592 3376	8.595 5530	8.598 7446	8.601 9130	30
31	8.585 8891	8.589 1524	8.592 3914	8.595 6063	8.598 7976	8.601 9656	29
32	8.585 9437	8.589 2066	8.592 4452	8.595 6597	8.598 8506	8.602 0182	28
33	8.585 9982	8.589 2608	8.592 4989	8.595 7131	8.598 9036	8.602 0708	27
34	8.586 0528	8.589 3149	8.592 5527	8.595 7665	8.598 9566	8.602 1234	26
35	8.586 1074	8.589 3691	8.592 6065	8.595 8198	8.599 0096	8.602 1760	25
36	8.586 1619	8.589 4233	8.592 6602	8.595 8732	8.599 0625	8.602 2286	24
37	8.586 2165	8.589 4774	8.592 7140	8.595 9265	8.599 1155	8.602 2812	23
38	8.586 2711	8.589 5315	8.592 7677	8.595 9799	8.599 1684	8.602 3337	22
39	8.586 3256	8.589 5857	8.592 8214	8.596 0332	8.599 2214	8.602 3863	21
40	8.586 3801	8.589 6398	8.592 8751	8.596 0865	8.599 2743	8.602 4388	20
41	8.586 4347	8.589 6939	8.592 9289	8.596 1399	8.599 3272	8.602 4914	19
42	8.586 4892	8.589 7480	8.592 9826	8.596 1932	8.599 3802	8.602 5439	18
43	8.586 5437	8.589 8021	8.593 0363	8.596 2465	8.599 4331	8.602 5965	17
44	8.586 5982	8.589 8562	8.593 0900	8.596 2998	8.599 4860	8.602 6490	16
45	8.586 6527	8.589 9103	8.593 1437	8.596 3531	8.599 5389	8.602 7015	15
46	8.586 7072	8.589 9644	8.593 1974	8.596 4064	8.599 5918	8.602 7540	14
47	8.586 7617	8.590 0185	8.593 2510	8.596 4597	8.599 6447	8.602 8065	13
48	8.586 8162	8.590 0726	8.593 3047	8.596 5129	8.599 6976	8.602 8590	12
49	8.586 8706	8.590 1266	8.593 3584	8.596 5662	8.599 7505	8.602 9115	11
50	8.586 9251	8.590 1807	8.593 4120	8.596 6195	8.599 8033	8.602 9640	10
51	8.586 9796	8.590 2348	8.593 4657	8.596 6727	8.599 8562	8.603 0165	9
52	8.587 0340	8.590 2888	8.593 5193	8.596 7260	8.599 9091	8.603 0690	8
53	8.587 0885	8.590 3428	8.593 5730	8.596 7792	8.599 9619	8.603 1214	7
54	8.587 1429	8.590 3969	8.593 6266	8.596 8325	8.600 0148	8.603 1739	6
55	8.587 1973	8.590 4509	8.593 6802	8.596 8857	8.600 0676	8.603 2264	5
56	8.587 2518	8.590 5049	8.593 7338	8.596 9389	8.600 1204	8.603 2788	4
57	8.587 3062	8.590 5589	8.593 7875	8.596 9921	8.600 1733	8.603 3313	3
58	8.587 3606	8.590 6129	8.593 8411	8.597 0453	8.600 2261	8.603 3837	2
59	8.587 4150	8.590 6669	8.593 8947	8.597 0985	8.600 2789	8.603 4361	1
60	8.587 4694	8.590 7209	8.593 9483	8.597 1517	8.600 3317	8.603 4886	0
"	47′	46′	45′	44′	43′	42′	"

cos 87°

tang 2°

″	12′	13′	14′	15′	16′	17′	″
0	8.584 5136	8.587 7945	8.591 0509	8.594 2832	8.597 4917	8.600 6767	60
1	8.584 5684	8.587 8490	8.591 1050	8.594 3369	8.597 5449	8.600 7296	59
2	8.584 6233	8.587 9035	8.591 1591	8.594 3905	8.597 5982	8.600 7824	58
3	8.584 6782	8.587 9579	8.591 2131	8.594 4442	8.597 6515	8.600 8353	57
4	8.584 7331	8.588 0124	8.591 2672	8.594 4978	8.597 7047	8.600 8882	56
5	8.584 7879	8.588 0668	8.591 3212	8.594 5515	8.597 7580	8.600 9410	55
6	8.584 8428	8.588 1213	8.591 3753	8.594 6051	8.597 8112	8.600 9939	54
7	8.584 8976	8.588 1757	8.591 4293	8.594 6588	8.597 8645	8.601 0468	53
8	8.584 9524	8.588 2301	8.591 4833	8.594 7124	8.597 9177	8.601 0996	52
9	8.585 0073	8.588 2845	8.591 5373	8.594 7660	8.597 9709	8.601 1524	51
10	8.585 0621	8.588 3389	8.591 5913	8.594 8196	8.598 0241	8.601 2053	50
11	8.585 1169	8.588 3934	8.591 6453	8.594 8732	8.598 0773	8.601 2581	49
12	8.585 1717	8.588 4478	8.591 6993	8.594 9268	8.598 1305	8.601 3109	48
13	8.585 2265	8.588 5021	8.591 7533	8.594 9804	8.598 1837	8.601 3637	47
14	8.585 2813	8.588 5565	8.591 8073	8.595 0340	8.598 2369	8.601 4165	46
15	8.585 3361	8.588 6109	8.591 8613	8.595 0875	8.598 2901	8.601 4693	45
16	8.585 3909	8.588 6653	8.591 9152	8.595 1411	8.598 3433	8.601 5221	44
17	8.585 4457	8.588 7196	8.591 9692	8.595 1947	8.598 3965	8.601 5749	43
18	8.585 5004	8.588 7740	8.592 0231	8.595 2482	8.598 4496	8.601 6277	42
19	8.585 5552	8.588 8284	8.592 0771	8.595 3018	8.598 5028	8.601 6804	41
20	8.585 6100	8.588 8827	8.592 1310	8.595 3553	8.598 5559	8.601 7332	40
21	8.585 6647	8.588 9370	8.592 1850	8.595 4089	8.598 6091	8.601 7860	39
22	8.585 7194	8.588 9914	8.592 2389	8.595 4624	8.598 6622	8.601 8387	38
23	8.585 7742	8.589 0457	8.592 2928	8.595 5159	8.598 7153	8.601 8915	37
24	8.585 8289	8.589 1000	8.592 3467	8.595 5694	8.598 7685	8.601 9442	36
25	8.585 8836	8.589 1543	8.592 4006	8.595 6229	8.598 8216	8.601 9969	35
26	8.585 9383	8.589 2086	8.592 4545	8.595 6764	8.598 8747	8.602 0496	34
27	8.585 9930	8.589 2629	8.592 5084	8.595 7299	8.598 9278	8.602 1024	33
28	8.586 0477	8.589 3172	8.592 5623	8.595 7834	8.598 9809	8.602 1551	32
29	8.586 1024	8.589 3715	8.592 6162	8.595 8369	8.599 0340	8.602 2078	31
30	8.586 1571	8.589 4258	8.592 6701	8.595 8904	8.599 0871	8.602 2605	30
31	8.586 2118	8.589 4800	8.592 7239	8.595 9439	8.599 1402	8.602 3132	29
32	8.586 2665	8.589 5343	8.592 7778	8.595 9973	8.599 1932	8.602 3659	28
33	8.586 3211	8.589 5886	8.592 8317	8.596 0508	8.599 2463	8.602 4186	27
34	8.586 3758	8.589 6428	8.592 8855	8.596 1042	8.599 2994	8.602 4712	26
35	8.586 4304	8.589 6971	8.592 9393	8.596 1577	8.599 3524	8.602 5239	25
36	8.586 4851	8.589 7513	8.592 9932	8.596 2111	8.599 4055	8.602 5766	24
37	8.586 5397	8.589 8055	8.593 0470	8.596 2646	8.599 4585	8.602 6292	23
38	8.586 5944	8.589 8597	8.593 1008	8.596 3180	8.599 5115	8.602 6819	22
39	8.586 6490	8.589 9140	8.593 1546	8.596 3714	8.599 5646	8.602 7345	21
40	8.586 7036	8.589 9682	8.593 2085	8.596 4248	8.599 6176	8.602 7872	20
41	8.586 7582	8.590 0224	8.593 2623	8.596 4782	8.599 6706	8.602 8398	19
42	8.586 8128	8.590 0766	8.593 3160	8.596 5316	8.599 7236	8.602 8924	18
43	8.586 8674	8.590 1308	8.593 3698	8.596 5850	8.599 7766	8.602 9450	17
44	8.586 9220	8.590 1849	8.593 4236	8.596 6384	8.599 8296	8.602 9976	16
45	8.586 9766	8.590 2391	8.593 4774	8.596 6918	8.599 8826	8.603 0502	15
46	8.587 0312	8.590 2933	8.593 5312	8.596 7451	8.599 9356	8.603 1028	14
47	8.587 0857	8.590 3474	8.593 5849	8.596 7985	8.599 9886	8.603 1554	13
48	8.587 1403	8.590 4016	8.593 6387	8.596 8519	8.600 0415	8.603 2080	12
49	8.587 1949	8.590 4558	8.593 6924	8.596 9052	8.600 0945	8.603 2606	11
50	8.587 2494	8.590 5099	8.593 7462	8.596 9586	8.600 1475	8.603 3132	10
51	8.587 3039	8.590 5640	8.593 7999	8.597 0119	8.600 2004	8.603 3657	9
52	8.587 3585	8.590 6182	8.593 8536	8.597 0652	8.600 2534	8.603 4183	8
53	8.587 4130	8.590 6723	8.593 9073	8.597 1186	8.600 3063	8.603 4709	7
54	8.587 4675	8.590 7264	8.593 9611	8.597 1719	8.600 3592	8.603 5234	6
55	8.587 5220	8.590 7805	8.594 0148	8.597 2252	8.600 4121	8.603 5760	5
56	8.587 5766	8.590 8346	8.594 0685	8.597 2785	8.600 4651	8.603 6285	4
57	8.587 6311	8.590 8887	8.594 1222	8.597 3318	8.600 5180	8.603 6810	3
58	8.587 6855	8.590 9428	8.594 1759	8.597 3851	8.600 5709	8.603 7335	2
59	8.587 7400	8.590 9969	8.594 2295	8.597 4384	8.600 6238	8.603 7861	1
60	8.587 7945	8.591 0509	8.594 2832	8.597 4917	8.600 6767	8.603 8386	0
″	47′	46′	45′	44′	43′	42′	″

cotg 87°

sin 2°

″	18′	19′	20′	21′	22′	23′	″
0	8.603 4886	8.606 6226	8.609 7341	8.612 8235	8.615 8910	8.618 9369	60
1	8.603 5410	8.606 6746	8.609 7858	8.612 8748	8.615 9419	8.618 9875	59
2	8.603 5934	8.606 7267	8.609 8374	8.612 9261	8.615 9928	8.619 0381	58
3	8.603 6458	8.606 7787	8.609 8891	8.612 9773	8.616 0438	8.619 0886	57
4	8.603 6982	8.606 8307	8.609 9407	8.613 0286	8.616 0947	8.619 1392	56
5	8.603 7506	8.606 8827	8.609 9924	8.613 0799	8.616 1456	8.619 1898	55
6	8.603 8030	8.606 9347	8.610 0440	8.613 1312	8.616 1965	8.619 2403	54
7	8.603 8554	8.606 9867	8.610 0957	8.613 1825	8.616 2474	8.619 2909	53
8	8.603 9077	8.607 0387	8.610 1473	8.613 2337	8.616 2983	8.619 3414	52
9	8.603 9601	8.607 0907	8.610 1989	8.613 2850	8.616 3492	8.619 3920	51
10	8.604 0125	8.607 1427	8.610 2505	8.613 3362	8.616 4001	8.619 4425	50
11	8.604 0648	8.607 1947	8.610 3021	8.613 3875	8.616 4510	8.619 4930	49
12	8.604 1172	8.607 2467	8.610 3537	8.613 4387	8.616 5019	8.619 5435	48
13	8.604 1695	8.607 2986	8.610 4053	8.613 4899	8.616 5527	8.619 5940	47
14	8.604 2219	8.607 3506	8.610 4569	8.613 5412	8.616 6036	8.619 6446	46
15	8.604 2742	8.607 4026	8.610 5085	8.613 5924	8.616 6545	8.619 6951	45
16	8.604 3265	8.607 4545	8.610 5601	8.613 6436	8.616 7053	8.619 7456	44
17	8.604 3788	8.607 5064	8.610 6117	8.613 6948	8.616 7561	8.619 7960	43
18	8.604 4311	8.607 5584	8.610 6632	8.613 7460	8.616 8070	8.619 8465	42
19	8.604 4835	8.607 6103	8.610 7148	8.613 7972	8.616 8578	8.619 8970	41
20	8.604 5357	8.607 6622	8.610 7663	8.613 8484	8.616 9087	8.619 9475	40
21	8.604 5880	8.607 7142	8.610 8179	8.613 8996	8.616 9595	8.619 9979	39
22	8.604 6403	8.607 7661	8.610 8694	8.613 9507	8.617 0103	8.620 0484	38
23	8.604 6926	8.607 8180	8.610 9210	8.614 0019	8.617 0611	8.620 0989	37
24	8.604 7449	8.607 8699	8.610 9725	8.614 0531	8.617 1119	8.620 1493	36
25	8.604 7972	8.607 9218	8.611 0240	8.614 1042	8.617 1627	8.620 1998	35
26	8.604 8494	8.607 9736	8.611 0755	8.614 1554	8.617 2135	8.620 2502	34
27	8.604 9017	8.608 0255	8.611 1270	8.614 2065	8.617 2643	8.620 3006	33
28	8.604 9539	8.608 0774	8.611 1785	8.614 2577	8.617 3151	8.620 3511	32
29	8.605 0062	8.608 1293	8.611 2300	8.614 3088	8.617 3658	8.620 4015	31
30	8.605 0584	8.608 1811	8.611 2815	8.614 3599	8.617 4166	8.620 4519	30
31	8.605 1106	8.608 2330	8.611 3330	8.614 4110	8.617 4674	8.620 5023	29
32	8.605 1629	8.608 2848	8.611 3845	8.614 4622	8.617 5181	8.620 5527	28
33	8.605 2151	8.608 3367	8.611 4360	8.614 5133	8.617 5689	8.620 6031	27
34	8.605 2673	8.608 3885	8.611 4874	8.614 5644	8.617 6196	8.620 6535	26
35	8.605 3195	8.608 4403	8.611 5389	8.614 6155	8.617 6704	8.620 7039	25
36	8.605 3717	8.608 4922	8.611 5904	8.614 6666	8.617 7211	8.620 7543	24
37	8.605 4239	8.608 5440	8.611 6418	8.614 7176	8.617 7718	8.620 8046	23
38	8.605 4761	8.608 5958	8.611 6932	8.614 7687	8.617 8225	8.620 8550	22
39	8.605 5282	8.608 6476	8.611 7447	8.614 8198	8.617 8733	8.620 9054	21
40	8.605 5804	8.608 6994	8.611 7961	8.614 8709	8.617 9240	8.620 9557	20
41	8.605 6326	8.608 7512	8.611 8475	8.614 9219	8.617 9747	8.621 0061	19
42	8.605 6847	8.608 8030	8.611 8990	8.614 9730	8.618 0254	8.621 0564	18
43	8.605 7369	8.608 8548	8.611 9504	8.615 0240	8.618 0761	8.621 1067	17
44	8.605 7891	8.608 9065	8.612 0018	8.615 0751	8.618 1267	8.621 1571	16
45	8.605 8412	8.608 9583	8.612 0532	8.615 1261	8.618 1774	8.621 2074	15
46	8.605 8933	8.609 0101	8.612 1046	8.615 1771	8.618 2281	8.621 2577	14
47	8.605 9455	8.609 0618	8.612 1560	8.615 2282	8.618 2788	8.621 3080	13
48	8.605 9976	8.609 1136	8.612 2073	8.615 2792	8.618 3294	8.621 3583	12
49	8.606 0497	8.609 1653	8.612 2587	8.615 3302	8.618 3801	8.621 4086	11
50	8.606 1018	8.609 2171	8.612 3101	8.615 3812	8.618 4307	8.621 4589	10
51	8.606 1539	8.609 2688	8.612 3615	8.615 4322	8.618 4814	8.621 5092	9
52	8.606 2060	8.609 3205	8.612 4128	8.615 4832	8.618 5320	8.621 5595	8
53	8.606 2581	8.609 3722	8.612 4642	8.615 5342	8.618 5826	8.621 6098	7
54	8.606 3102	8.609 4240	8.612 5155	8.615 5852	8.618 6333	8.621 6601	6
55	8.606 3623	8.609 4757	8.612 5669	8.615 6362	8.618 6839	8.621 7103	5
56	8.606 4143	8.609 5274	8.612 6182	8.615 6871	8.618 7345	8.621 7606	4
57	8.606 4664	8.609 5791	8.612 6695	8.615 7381	8.618 7851	8.621 8109	3
58	8.606 5185	8.609 6307	8.612 7208	8.615 7891	8.618 8357	8.621 8611	2
59	8.606 5705	8.609 6824	8.612 7721	8.615 8400	8.618 8863	8.621 9114	1
60	8.606 6226	8.609 7341	8.612 8235	8.615 8910	8.618 9369	8.621 9616	0
″	41′	40′	39′	38′	37′	36′	″

cos 87°

tang 2°

″	18′	19′	20′	21′	22′	23′	″
0	8.603 8386	8.606 9777	8.610 0943	8.613 1889	8.616 2616	8.619 3127	60
1	8.603 8911	8.607 0298	8.610 1461	8.613 2402	8.616 3126	8.619 3634	59
2	8.603 9436	8.607 0819	8.610 1978	8.613 2916	8.616 3636	8.619 4141	58
3	8.603 9961	8.607 1340	8.610 2496	8.613 3430	8.616 4146	8.619 4647	57
4	8.604 0485	8.607 1862	8.610 3013	8.613 3944	8.616 4656	8.619 5154	56
5	8.604 1010	8.607 2383	8.610 3531	8.613 4457	8.616 5166	8.619 5660	55
6	8.604 1535	8.607 2903	8.610 4048	8.613 4971	8.616 5676	8.619 6167	54
7	8.604 2060	8.607 3424	8.610 4565	8.613 5485	8.616 6186	8.619 6673	53
8	8.604 2584	8.607 3945	8.610 5082	8.613 5998	8.616 6696	8.619 7180	52
9	8.604 3109	8.607 4466	8.610 5599	8.613 6511	8.616 7206	8.619 7686	51
10	8.604 3633	8.607 4987	8.610 6116	8.613 7025	8.616 7716	8.619 8192	50
11	8.604 4158	8.607 5507	8.610 6633	8.613 7538	8.616 8225	8.619 8698	49
12	8.604 4682	8.607 6028	8.610 7150	8.613 8051	8.616 8735	8.619 9204	48
13	8.604 5206	8.607 6548	8.610 7667	8.613 8564	8.616 9245	8.619 9710	47
14	8.604 5731	8.607 7069	8.610 8184	8.613 9078	8.616 9754	8.620 0216	46
15	8.604 6255	8.607 7589	8.610 8700	8.613 9591	8.617 0264	8.620 0722	45
16	8.604 6779	8.607 8110	8.610 9217	8.614 0104	8.617 0773	8.620 1228	44
17	8.604 7303	8.607 8630	8.610 9733	8.614 0617	8.617 1282	8.620 1734	43
18	8.604 7827	8.607 9150	8.611 0250	8.614 1129	8.617 1792	8.620 2239	42
19	8.604 8351	8.607 9670	8.611 0766	8.614 1642	8.617 2301	8.620 2745	41
20	8.604 8875	8.608 0190	8.611 1283	8.614 2155	8.617 2810	8.620 3251	40
21	8.604 9398	8.608 0710	8.611 1799	8.614 2668	8.617 3319	8.620 3756	39
22	8.604 9922	8.608 1230	8.611 2315	8.614 3180	8.617 3828	8.620 4262	38
23	8.605 0446	8.608 1750	8.611 2832	8.614 3693	8.617 4337	8.620 4767	37
24	8.605 0969	8.608 2270	8.611 3348	8.614 4205	8.617 4846	8.620 5273	36
25	8.605 1493	8.608 2790	8.611 3864	8.614 4718	8.617 5355	8.620 5778	35
26	8.605 2016	8.608 3310	8.611 4380	8.614 5230	8.617 5864	8.620 6283	34
27	8.605 2540	8.608 3829	8.611 4896	8.614 5743	8.617 6372	8.620 6788	33
28	8.605 3063	8.608 4349	8.611 5412	8.614 6255	8.617 6881	8.620 7294	32
29	8.605 3586	8.608 4868	8.611 5928	8.614 6767	8.617 7390	8.620 7799	31
30	8.605 4110	8.608 5388	8.611 6443	8.614 7279	8.617 7898	8.620 8304	30
31	8.605 4633	8.608 5907	8.611 6959	8.614 7791	8.617 8407	8.620 8809	29
32	8.605 5156	8.608 6427	8.611 7475	8.614 8303	8.617 8915	8.620 9314	28
33	8.605 5679	8.608 6946	8.611 7990	8.614 8815	8.617 9424	8.620 9818	27
34	8.605 6202	8.608 7465	8.611 8506	8.614 9327	8.617 9932	8.621 0323	26
35	8.605 6725	8.608 7984	8.611 9021	8.614 9839	8.618 0440	8.621 0828	25
36	8.605 7247	8.608 8503	8.611 9537	8.615 0351	8.618 0948	8.621 1333	24
37	8.605 7770	8.608 9022	8.612 0052	8.615 0862	8.618 1456	8.621 1837	23
38	8.605 8293	8.608 9541	8.612 0567	8.615 1374	8.618 1965	8.621 2342	22
39	8.605 8816	8.609 0060	8.612 1083	8.615 1886	8.618 2473	8.621 2846	21
40	8.605 9338	8.609 0579	8 612 1598	8.615 2397	8.618 2981	8.621 3351	20
41	8.605 9861	8.609 1098	8.612 2113	8.615 2909	8.618 3488	8.621 3855	19
42	8.606 0383	8.609 1617	8.612 2628	8.615 3420	8.618 3996	8.621 4359	18
43	8.606 0906	8.609 2135	8.612 3143	8.615 3932	8.618 4504	8.621 4864	17
44	8.606 1428	8.609 2654	8.612 3658	8.615 4443	8.618 5012	8.621 5368	16
45	8.606 1950	8.609 3173	8.612 4173	8.615 4954	8.618 5519	8.621 5872	15
46	8.606 2472	8.609 3691	8.612 4688	8.615 5465	8.618 6027	8.621 6376	14
47	8.606 2995	8.609 4209	8.612 5202	8.615 5976	8.618 6535	8.621 6880	13
48	8.606 3517	8.609 4728	8.612 5717	8.615 6487	8.618 7042	8.621 7384	12
49	8.606 4039	8.609 5246	8.612 6232	8.615 6998	8.618 7550	8.621 7888	11
50	8.606 4561	8.609 5764	8.612 6746	8.615 7509	8.618 8057	8.621 8392	10
51	8.606 5083	8.609 6283	8.612 7261	8.615 8020	8.618 8564	8.621 8896	9
52	8.606 5604	8.609 6801	8.612 7775	8.615 8531	8.618 9072	8.621 9399	8
53	8.606 6126	8.609 7319	8.612 8290	8.615 9042	8.618 9579	8.621 9903	7
54	8.606 6648	8.609 7837	8.612 8804	8.615 9553	8.619 0086	8.622 0407	6
55	8.606 7169	8.609 8355	8.612 9318	8.616 0063	8.619 0593	8.622 0910	5
56	8.606 7691	8.609 8872	8.612 9832	8.616 0574	8.619 1100	8.622 1414	4
57	8.606 8213	8.609 9390	8.613 0347	8.616 1084	8.619 1607	8.622 1917	3
58	8.606 8734	8.609 9908	8.613 0861	8.616 1595	8.619 2114	8.622 2421	2
59	8.606 9255	8.610 0426	8.613 1375	8.616 2105	8.619 2621	8.622 2924	1
60	8.606 9777	8.610 0943	8.613 1889	8.616 2616	8.619 3127	8.622 3427	0
″	41′	40′	39′	38′	37′	36′	″

cotg 87°

sin 2°

″	24′	25′	26′	27′	28′	29′	″
0	8.621 9616	8.624 9653	8.627 9484	8.630 9111	8.633 8537	8.636 7764	60
1	8.622 0118	8.625 0152	8.627 9980	8.630 9603	8.633 9025	8.636 8249	59
2	8.622 0621	8.625 0651	8.628 0475	8.631 0095	8.633 9514	8.636 8735	58
3	8.622 1123	8.625 1150	8.628 0970	8.631 0587	8.634 0003	8.636 9220	57
4	8.622 1625	8.625 1649	8.628 1466	8.631 1079	8.634 0491	8.636 9706	56
5	8.622 2127	8.625 2147	8.628 1961	8.631 1571	8.634 0980	8.637 0191	55
6	8.622 2629	8.625 2646	8.628 2456	8.631 2063	8.634 1468	8.637 0676	54
7	8.622 3131	8.625 3144	8.628 2951	8.631 2554	8.634 1957	8.637 1161	53
8	8.622 3633	8.625 3643	8.628 3446	8.631 3046	8.634 2445	8.637 1646	52
9	8.622 4135	8.625 4141	8.628 3941	8.631 3538	8.634 2933	8.637 2131	51
10	8.622 4637	8.625 4639	8.628 4436	8.631 4029	8.634 3422	8.637 2616	50
11	8.622 5138	8.625 5138	8.628 4931	8.631 4521	8.634 3910	8.637 3101	49
12	8.622 5640	8.625 5636	8.628 5426	8.631 5012	8.634 4398	8.637 3586	48
13	8.622 6142	8.625 6134	8.628 5920	8.631 5503	8.634 4886	8.637 4071	47
14	8.622 6643	8.625 6632	8.628 6415	8.631 5995	8.634 5374	8.637 4555	46
15	8.622 7145	8.625 7130	8.628 6910	8.631 6486	8.634 5862	8.637 5040	45
16	8.622 7646	8.625 7628	8.628 7404	8.631 6977	8.634 6350	8.637 5525	44
17	8.622 8148	8.625 8126	8.628 7899	8.631 7469	8.634 6838	8.637 6009	43
18	8.622 8649	8.625 8624	8.628 8393	8.631 7960	8.634 7326	8.637 6494	42
19	8.622 9150	8.625 9122	8.628 8888	8.631 8451	8.634 7813	8.637 6978	41
20	8.622 9652	8.625 9620	8.628 9382	8.631 8942	8.634 8301	8.637 7463	40
21	8.623 0153	8.626 0118	8.628 9877	8.631 9433	8.634 8789	8.637 7947	39
22	8.623 0654	8.626 0615	8.629 0371	8.631 9924	8.634 9276	8.637 8432	38
23	8.623 1155	8.626 1113	8.629 0865	8.632 0414	8.634 9764	8.637 8916	37
24	8.623 1656	8.626 1610	8.629 1359	8.632 0905	8.635 0251	8.637 9400	36
25	8.623 2157	8.626 2108	8.629 1853	8.632 1396	8.635 0739	8.637 9884	35
26	8.623 2658	8.626 2605	8.629 2347	8.632 1887	8.635 1226	8.638 0368	34
27	8.623 3159	8.626 3103	8.629 2841	8.632 2377	8.635 1713	8.638 0852	33
28	8.623 3659	8.626 3600	8.629 3335	8.632 2868	8.635 2201	8.638 1336	32
29	8.623 4160	8.626 4097	8.629 3829	8.632 3358	8.635 2688	8.638 1820	31
30	8.623 4661	8.626 4594	8.629 4323	8.632 3849	8.635 3175	8.638 2304	30
31	8.623 5161	8.626 5092	8.629 4817	8.632 4339	8.635 3662	8.638 2788	29
32	8.623 5662	8.626 5589	8.629 5310	8.632 4830	8.635 4149	8.638 3272	28
33	8.623 6162	8.626 6086	8.629 5804	8.632 5320	8.635 4636	8.638 3755	27
34	8.623 6663	8.626 6583	8.629 6298	8.632 5810	8.635 5123	8.638 4239	26
35	8.623 7163	8.626 7080	8.629 6791	8.632 6300	8.635 5610	8.638 4723	25
36	8.623 7663	8.626 7576	8.629 7285	8.632 6790	8.635 6097	8.638 5206	24
37	8.623 8164	8.626 8073	8.629 7778	8.632 7280	8.635 6583	8.638 5690	23
38	8.623 8664	8.626 8570	8.629 8271	8.632 7770	8.635 7070	8.638 6173	22
39	8.623 9164	8.626 9067	8.629 8765	8.632 8260	8.635 7557	8.638 6657	21
40	8.623 9664	8.626 9563	8.629 9258	8.632 8750	8.635 8043	8.638 7140	20
41	8.624 0164	8.627 0060	8.629 9751	8.632 9240	8.635 8530	8.638 7623	19
42	8.624 0664	8.627 0556	8.630 0244	8.632 9730	8.635 9016	8.638 8107	18
43	8.624 1164	8.627 1053	8.630 0737	8.633 0220	8.635 9503	8.638 8590	17
44	8.624 1664	8.627 1549	8.630 1230	8.633 0709	8.635 9989	8.638 9073	16
45	8.624 2164	8.627 2046	8.630 1723	8.633 1199	8.636 0476	8.638 9556	15
46	8.624 2663	8.627 2542	8.630 2216	8.633 1689	8.636 0962	8.639 0039	14
47	8.624 3163	8.627 3038	8.630 2709	8.633 2178	8.636 1448	8.639 0522	13
48	8.624 3663	8.627 3534	8.630 3202	8.633 2667	8.636 1934	8.639 1005	12
49	8.624 4162	8.627 4030	8.630 3694	8.633 3157	8.636 2420	8.639 1488	11
50	8.624 4662	8.627 4527	8.630 4187	8.633 3646	8.636 2906	8.639 1971	10
51	8.624 5161	8.627 5023	8.630 4680	8.633 4136	8.636 3392	8.639 2453	9
52	8.624 5660	8.627 5519	8.630 5172	8.633 4625	8.636 3878	8.639 2936	8
53	8.624 6160	8.627 6014	8.630 5665	8.633 5114	8.636 4364	8.639 3419	7
54	8.624 6659	8.627 6510	8.630 6157	8.633 5603	8.636 4850	8.639 3901	6
55	8.624 7158	8.627 7006	8.630 6650	8.633 6092	8.636 5336	8.639 4384	5
56	8.624 7657	8.627 7502	8.630 7142	8.633 6581	8.636 5822	8.639 4866	4
57	8.624 8156	8.627 7997	8.630 7634	8.633 7070	8.636 6307	8.639 5349	3
58	8.624 8655	8.627 8493	8.630 8127	8.633 7559	8.636 6793	8.639 5831	2
59	8.624 9154	8.627 8989	8.630 8619	8.633 8048	8.636 7279	8.639 6313	1
60	8.624 9653	8.627 9484	8.630 9111	8.633 8537	8.636 7764	8.639 6796	0
″	35′	34′	33′	32′	31′	30′	″

cos 87°

"	24′	25′	26′	27′	28′	29′	"
0	8.622 3427	8.625 3518	8.628 3402	8.631 3083	8.634 2563	8.637 1845	60
1	8.622 3930	8.625 4017	8.628 3898	8.631 3576	8.634 3052	8.637 2331	59
2	8.622 4434	8.625 4517	8.628 4395	8.631 4069	8.634 3542	8.637 2817	58
3	8.622 4937	8.625 5017	8.628 4891	8.631 4561	8.634 4031	8.637 3303	57
4	8.622 5440	8.625 5516	8.628 5387	8.631 5054	8.634 4521	8.637 3790	56
5	8.622 5943	8.625 6016	8.628 5883	8.631 5547	8.634 5010	8.637 4276	55
6	8.622 6446	8.625 6515	8.628 6379	8.631 6040	8.634 5500	8.637 4762	54
7	8.622 6948	8.625 7015	8.628 6875	8.631 6532	8.634 5989	8.637 5248	53
8	8.622 7451	8.625 7514	8.628 7371	8.631 7025	8.634 6478	8.637 5734	52
9	8.622 7954	8.625 8013	8.628 7867	8.631 7517	8.634 6967	8.637 6220	51
10	8.622 8457	8.625 8513	8.628 8363	8.631 8010	8.634 7457	8.637 6706	50
11	8.622 8959	8.625 9012	8.628 8859	8.631 8502	8.634 7946	8.637 7192	49
12	8.622 9462	8.625 9511	8.628 9354	8.631 8995	8.634 8435	8.637 7677	48
13	8.622 9964	8.626 0010	8.628 9850	8.631 9487	8.634 8924	8.637 8163	47
14	8.623 0467	8.626 0509	8.629 0346	8.631 9979	8.634 9413	8.637 8649	46
15	8.623 0969	8.626 1008	8.629 0841	8.632 0471	8.634 9902	8.637 9134	45
16	8.623 1472	8.626 1507	8.629 1337	8.632 0963	8.635 0390	8.637 9620	44
17	8.623 1974	8.626 2006	8.629 1832	8.632 1456	8.635 0879	8.638 0105	43
18	8.623 2476	8.626 2505	8.629 2327	8.632 1948	8.635 1368	8.638 0591	42
19	8.623 2978	8.626 3003	8.629 2823	8.632 2440	8.635 1857	8.638 1076	41
20	8.623 3480	8.626 3502	8.629 3318	8.632 2931	8.635 2345	8.638 1562	40
21	8.623 3983	8.626 4001	8.629 3813	8.632 3423	8.635 2834	8.638 2047	39
22	8.623 4485	8.626 4499	8.629 4308	8.632 3915	8.635 3322	8.638 2532	38
23	8.623 4986	8.626 4998	8.629 4803	8.632 4407	8.635 3811	8.638 3017	37
24	8.623 5488	8.626 5496	8.629 5298	8.632 4899	8.635 4299	8.638 3502	36
25	8.623 5990	8.626 5994	8.629 5793	8.632 5390	8.635 4787	8.638 3988	35
26	8.623 6492	8.626 6493	8.629 6288	8.632 5882	8.635 5276	8.638 4473	34
27	8.623 6994	8.626 6991	8.629 6783	8.632 6373	8.635 5764	8.638 4958	33
28	8.623 7495	8.626 7489	8.629 7278	8.632 6865	8.635 6252	8.638 5442	32
29	8.623 7997	8.626 7987	8.629 7773	8.632 7356	8.635 6740	8.638 5927	31
30	8.623 8498	8.626 8485	8.629 8268	8.632 7848	8.635 7228	8.638 6412	30
31	8.623 9000	8.626 8983	8.629 8762	8.632 8339	8.635 7716	8.638 6897	29
32	8.623 9501	8.626 9481	8.629 9257	8.632 8830	8.635 8204	8.638 7382	28
33	8.624 0003	8.626 9979	8.629 9751	8.632 9321	8.635 8692	8.638 7866	27
34	8.624 0504	8.627 0477	8.630 0246	8.632 9812	8.635 9180	8.638 8351	26
35	8.624 1005	8.627 0975	8.630 0740	8.633 0303	8.635 9668	8.638 8835	25
36	8.624 1506	8.627 1473	8.630 1235	8.633 0795	8.636 0155	8.638 9320	24
37	8.624 2008	8.627 1971	8.630 1729	8.633 1285	8.636 0643	8.638 9804	23
38	8.624 2509	8.627 2468	8.630 2223	8.633 1776	8.636 1131	8.639 0289	22
39	8.624 3010	8.627 2966	8.630 2717	8.633 2267	8.636 1618	8.639 0773	21
40	8.624 3511	8.627 3463	8.630 3211	8.633 2758	8.636 2106	8.639 1257	20
41	8.624 4011	8.627 3961	8.630 3706	8.633 3249	8.636 2593	8.639 1741	19
42	8.624 4512	8.627 4458	8.630 4200	8.633 3740	8.636 3081	8.639 2225	18
43	8.624 5013	8.627 4956	8.630 4694	8.633 4230	8.636 3568	8.639 2710	17
44	8.624 5514	8.627 5453	8.630 5188	8.633 4721	8.636 4055	8.639 3194	16
45	8.624 6015	8.627 5950	8.630 5681	8.633 5211	8.636 4542	8.639 3678	15
46	8.624 6515	8.627 6447	8.630 6175	8.633 5702	8.636 5030	8.639 4162	14
47	8.624 7016	8.627 6944	8.630 6669	8.633 6192	8.636 5517	8.639 4645	13
48	8.624 7516	8.627 7441	8.630 7163	8.633 6683	8.636 6004	8.639 5129	12
49	8.624 8017	8.627 7938	8.630 7656	8.633 7173	8.636 6491	8.639 5613	11
50	8.624 8517	8.627 8435	8.630 8150	8.633 7663	8.636 6978	8.639 6097	10
51	8.624 9017	8.627 8932	8.630 8643	8.633 8153	8.636 7465	8.639 6580	9
52	8.624 9518	8.627 9429	8.630 9137	8.633 8643	8.636 7952	8.639 7064	8
53	8.625 0018	8.627 9926	8.630 9630	8.633 9134	8.636 8438	8.639 7548	7
54	8.625 0518	8.628 0423	8.631 0124	8.633 9624	8.636 8925	8.639 8031	6
55	8.625 1018	8.628 0919	8.631 0617	8.634 0114	8.636 9412	8.639 8515	5
56	8.625 1518	8.628 1416	8.631 1110	8.634 0603	8.636 9899	8.639 8998	4
57	8.625 2018	8.628 1913	8.631 1603	8.634 1093	8.637 0385	8.639 9481	3
58	8.625 2518	8.628 2409	8.631 2097	8.634 1583	8.637 0872	8.639 9965	2
59	8.625 3018	8.628 2906	8.631 2590	8.634 2073	8.637 1358	8.640 0448	1
60	8.625 3518	8.628 3402	8.631 3083	8.634 2563	8.637 1845	8.640 0931	0
"	35′	34′	33′	32′	31′	30′	"

sin 2°

″	30′	31′	32′	33′	34′	35′	″
0	8.639 6796	8.642 5634	8.645 4282	8.648 2742	8.651 1016	8.653 9107	60
1	8.639 7278	8.642 6113	8.645 4758	8.648 3214	8.651 1485	8.653 9573	59
2	8.639 7760	8.642 6592	8.645 5234	8.648 3687	8.651 1955	8.654 0040	58
3	8.639 8242	8.642 7071	8.645 5709	8.648 4160	8.651 2425	8.654 0506	57
4	8.639 8724	8.642 7550	8.645 6185	8.648 4632	8.651 2894	8.654 0973	56
5	8.639 9206	8.642 8029	8.645 6661	8.648 5105	8.651 3364	8.654 1439	55
6	8.639 9688	8.642 8507	8.645 7136	8.648 5577	8.651 3833	8.654 1906	54
7	8.640 0170	8.642 8986	8.645 7612	8.648 6050	8.651 4302	8.654 2372	53
8	8.640 0652	8.642 9465	8.645 8087	8.648 6522	8.651 4772	8.654 2838	52
9	8.640 1134	8.642 9943	8.645 8563	8.648 6995	8.651 5241	8.654 3305	51
10	8.640 1615	8.643 0422	8.645 9038	8.648 7467	8.651 5710	8.654 3771	50
11	8.640 2097	8.643 0900	8.645 9514	8.648 7939	8.651 6179	8.654 4237	49
12	8.640 2579	8.643 1379	8.645 9989	8.648 8411	8.651 6649	8.654 4703	48
13	8.640 3060	8.643 1857	8.646 0464	8.648 8883	8.651 7118	8.654 5169	47
14	8.640 3542	8.643 2336	8.646 0939	8.648 9355	8.651 7587	8.654 5635	46
15	8.640 4023	8.643 2814	8.646 1414	8.648 9827	8.651 8056	8.654 6101	45
16	8.640 4505	8.643 3292	8.646 1889	8.649 0299	8.651 8524	8.654 6567	44
17	8.640 4986	8.643 3770	8.646 2364	8.649 0771	8.651 8993	8.654 7033	43
18	8.640 5467	8.643 4248	8.646 2839	8.649 1243	8.651 9462	8.654 7498	42
19	8.640 5949	8.643 4726	8.646 3314	8.649 1715	8.651 9931	8.654 7964	41
20	8.640 6430	8.643 5204	8.646 3789	8.649 2187	8.652 0400	8.654 8430	40
21	8.640 6911	8.643 5682	8.646 4264	8.649 2659	8.652 0868	8.654 8896	39
22	8.640 7392	8.643 6160	8.646 4739	8.649 3130	8.652 1337	8.654 9361	38
23	8.640 7873	8.643 6638	8.646 5214	8.649 3602	8.652 1805	8.654 9827	37
24	8.640 8354	8.643 7116	8.646 5688	8.649 4073	8.652 2274	8.655 0292	36
25	8.640 8835	8.643 7594	8.646 6163	8.649 4545	8.652 2742	8.655 0758	35
26	8.640 9316	8.643 8071	8.646 6637	8.649 5016	8.652 3211	8.655 1223	34
27	8.640 9797	8.643 8549	8.646 7112	8.649 5488	8.652 3679	8.655 1688	33
28	8.641 0277	8.643 9027	8.646 7586	8.649 5959	8.652 4147	8.655 2154	32
29	8.641 0758	8.643 9504	8.646 8061	8.649 6430	8.652 4616	8.655 2619	31
30	8.641 1239	8.643 9982	8.646 8535	8.649 6902	8.652 5084	8.655 3084	30
31	8.641 1719	8.644 0459	8.646 9009	8.649 7373	8.652 5552	8.655 3549	29
32	8.641 2200	8.644 0936	8.646 9484	8.649 7844	8.652 6020	8.655 4014	28
33	8.641 2680	8.644 1414	8.646 9958	8.649 8315	8.652 6488	8.655 4479	27
34	8.641 3161	8.644 1891	8.647 0432	8.649 8786	8.652 6956	8.655 4944	26
35	8.641 3641	8.644 2368	8.647 0906	8.649 9257	8.652 7424	8.655 5409	25
36	8.641 4122	8.644 2845	8.647 1380	8.649 9728	8.652 7892	8.655 5874	24
37	8.641 4602	8.644 3323	8.647 1854	8.650 0199	8.652 8360	8.655 6339	23
38	8.641 5082	8.644 3800	8.647 2328	8.650 0670	8.652 8828	8.655 6804	22
39	8.641 5562	8.644 4277	8.647 2802	8.650 1141	8.652 9295	8.655 7268	21
40	8.641 6043	8.644 4754	8.647 3276	8.650 1612	8.652 9763	8.655 7733	20
41	8.641 6523	8.644 5231	8.647 3750	8.650 2082	8.653 0231	8.655 8198	19
42	8.641 7003	8.644 5707	8.647 4223	8.650 2553	8.653 0698	8.655 8662	18
43	8.641 7483	8.644 6184	8.647 4697	8.650 3023	8.653 1166	8.655 9127	17
44	8.641 7963	8.644 6661	8.647 5171	8.650 3494	8.653 1633	8.655 9591	16
45	8.641 8442	8.644 7138	8.647 5644	8.650 3964	8.653 2101	8.656 0056	15
46	8.641 8922	8.644 7614	8.647 6118	8.650 4435	8.653 2568	8.656 0520	14
47	8.641 9402	8.644 8091	8.647 6591	8.650 4905	8.653 3036	8.656 0985	13
48	8.641 9882	8.644 8567	8.647 7065	8.650 5376	8.653 3503	8.656 1449	12
49	8.642 0361	8.644 9044	8.647 7538	8.650 5846	8.653 3970	8.656 1913	11
50	8.642 0841	8.644 9520	8.647 8011	8.650 6316	8.653 4437	8.656 2377	10
51	8.642 1321	8.644 9997	8.647 8485	8.650 6786	8.653 4905	8.656 2841	9
52	8.642 1800	8.645 0473	8.647 8958	8.650 7257	8.653 5372	8.656 3306	8
53	8.642 2279	8.645 0949	8.647 9431	8.650 7727	8.653 5839	8.656 3770	7
54	8.642 2759	8.645 1426	8.647 9904	8.650 8197	8.653 6306	8.656 4234	6
55	8.642 3238	8.645 1902	8.648 0377	8.650 8667	8.653 6773	8.656 4698	5
56	8.642 3717	8.645 2378	8.648 0850	8.650 9137	8.653 7240	8.656 5161	4
57	8.642 4197	8.645 2854	8.648 1323	8.650 9606	8.653 7706	8.656 5625	3
58	8.642 4676	8.645 3330	8.648 1796	8.651 0076	8.653 8173	8.656 6089	2
59	8.642 5155	8.645 3806	8.648 2269	8.651 0546	8.653 8640	8.656 6553	1
60	8.642 5634	8.645 4282	8.648 2742	8.651 1016	8.653 9107	8.656 7017	0
″	29′	28′	27′	26′	25′	24′	″

cos 87°

″	30′	31′	32′	33′	34′	35′	″
0	8.640 0931	8.642 9825	8.645 8528	8.648 7044	8.651 5375	8.654 3522	60
1	8.640 1414	8.643 0305	8.645 9005	8.648 7518	8.651 5845	8.654 3990	59
2	8.640 1897	8.643 0785	8.645 9482	8.648 7992	8.651 6316	8.654 4458	58
3	8.640 2380	8.643 1265	8.645 9959	8.648 8465	8.651 6787	8.654 4925	57
4	8.640 2863	8.643 1744	8.646 0435	8.648 8939	8.651 7257	8.654 5393	56
5	8.640 3346	8.643 2224	8.646 0912	8.648 9412	8.651 7727	8.654 5860	55
6	8.640 3829	8.643 2704	8.646 1388	8.648 9886	8.651 8198	8.654 6327	54
7	8.640 4312	8.643 3183	8.646 1865	8.649 0359	8.651 8668	8.654 6795	53
8	8.640 4795	8.643 3663	8.646 2341	8.649 0832	8.651 9138	8.654 7262	52
9	8.640 5277	8.643 4142	8.646 2818	8.649 1306	8.651 9609	8.654 7729	51
10	8.640 5760	8.643 4622	8.646 3294	8.649 1779	8.652 0079	8.654 8196	50
11	8.640 6243	8.643 5101	8.646 3770	8.649 2252	8.652 0549	8.654 8663	49
12	8.640 6725	8.643 5581	8.646 4247	8.649 2725	8.652 1019	8.654 9130	48
13	8.640 7208	8.643 6060	8.646 4723	8.649 3198	8.652 1489	8.654 9597	47
14	8.640 7690	8.643 6539	8.646 5199	8.649 3671	8.652 1959	8.655 0064	46
15	8.640 8173	8.643 7019	8.646 5675	8.649 4144	8.652 2429	8.655 0531	45
16	8.640 8655	8.643 7498	8.646 6151	8.649 4617	8.652 2899	8.655 0998	44
17	8.640 9137	8.643 7977	8.646 6627	8.649 5090	8.652 3368	8.655 1465	43
18	8.640 9619	8.643 8456	8.646 7103	8.649 5563	8.652 3838	8.655 1931	42
19	8.641 0102	8.643 8935	8.646 7579	8.649 6036	8.652 4308	8.655 2398	41
20	8.641 0584	8.643 9414	8.646 8054	8.649 6508	8.652 4778	8.655 2865	40
21	8.641 1066	8.643 9893	8.646 8530	8.649 6981	8.652 5247	8.655 3331	39
22	8.641 1548	8.644 0371	8.646 9006	8.649 7454	8.652 5717	8.655 3798	38
23	8.641 2030	8.644 0850	8.646 9482	8.649 7926	8.652 6186	8.655 4264	37
24	8.641 2512	8.644 1329	8.646 9957	8.649 8399	8.652 6656	8.655 4731	36
25	8.641 2993	8.644 1808	8.647 0433	8.649 8871	8.652 7125	8.655 5197	35
26	8.641 3475	8.644 2286	8.647 0908	8.649 9343	8.652 7594	8.655 5664	34
27	8.641 3957	8.644 2765	8.647 1384	8.649 9816	8.652 8064	8.655 6130	33
28	8.641 4439	8.644 3243	8.647 1859	8.650 0288	8.652 8533	8.655 6596	32
29	8.641 4920	8.644 3722	8.647 2334	8.650 0760	8.652 9002	8.655 7062	31
30	8.641 5402	8.644 4200	8.647 2810	8.650 1233	8.652 9471	8.655 7528	30
31	8.641 5883	8.644 4679	8.647 3285	8.650 1705	8.652 9940	8.655 7995	29
32	8.641 6365	8.644 5157	8.647 3760	8.650 2177	8.653 0410	8.655 8461	28
33	8.641 6846	8.644 5635	8.647 4235	8.650 2649	8.653 0879	8.655 8927	27
34	8.641 7328	8.644 6113	8.647 4710	8.650 3121	8.653 1347	8.655 9393	26
35	8.641 7809	8.644 6592	8.647 5185	8.650 3593	8.653 1816	8.655 9858	25
36	8.641 8290	8.644 7070	8.647 5660	8.650 4065	8.653 2285	8.656 0324	24
37	8.641 8772	8.644 7548	8.647 6135	8.650 4537	8.653 2754	8.656 0790	23
38	8.641 9253	8.644 8026	8.647 6610	8.650 5008	8.653 3223	8.656 1256	22
39	8.641 9734	8.644 8504	8.647 7085	8.650 5480	8.653 3691	8.656 1721	21
40	8.642 0215	8.644 8982	8.647 7560	8.650 5952	8.653 4160	8.656 2187	20
41	8.642 0696	8.644 9459	8.647 8034	8.650 6423	8.653 4629	8.656 2653	19
42	8.642 1177	8.644 9937	8.647 8509	8.650 6895	8.653 5097	8.656 3118	18
43	8.642 1658	8.645 0415	8.647 8984	8.650 7366	8.653 5566	8.656 3584	17
44	8.642 2139	8.645 0893	8.647 9458	8.650 7838	8.653 6034	8.656 4049	16
45	8.642 2619	8.645 1370	8.647 9933	8.650 8309	8.653 6503	8.656 4515	15
46	8.642 3100	8.645 1848	8.648 0407	8.650 8781	8.653 6971	8.656 4980	14
47	8.642 3581	8.645 2325	8.648 0882	8.650 9252	8.653 7439	8.656 5445	13
48	8.642 4061	8.645 2803	8.648 1356	8.650 9723	8.653 7907	8.656 5911	12
49	8.642 4542	8.645 3280	8.648 1830	8.651 0195	8.653 8376	8.656 6376	11
50	8.642 5023	8.645 3758	8.648 2305	8.651 0666	8.653 8844	8.656 6841	10
51	8.642 5503	8.645 4235	8.648 2779	8.651 1137	8.653 9312	8.656 7306	9
52	8.642 5983	8.645 4712	8.648 3253	8.651 1608	8.653 9780	8.656 7771	8
53	8.642 6464	8.645 5189	8.648 3727	8.651 2079	8.654 0248	8.656 8236	7
54	8.642 6944	8.645 5667	8.648 4201	8.651 2550	8.654 0716	8.656 8701	6
55	8.642 7424	8.645 6144	8.648 4675	8.651 3021	8.654 1184	8.656 9166	5
56	8.642 7905	8.645 6621	8.648 5149	8.651 3492	8.654 1652	8.656 9631	4
57	8.642 8385	8.645 7098	8.648 5623	8.651 3963	8.654 2119	8.657 0096	3
58	8.642 8865	8.645 7575	8.648 6097	8.651 4433	8.654 2587	8.657 0560	2
59	8.642 9345	8.645 8052	8.648 6571	8.651 4904	8.654 3055	8.657 1025	1
60	8.642 9825	8.645 8528	8.648 7044	8.651 5375	8.654 3522	8.657 1490	0
″	29′	28′	27′	26′	25′	24′	″

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″	36′	37′	38′	39′	40′	41′	″
0	8.656 7017	8.659 4748	8.662 2303	8.664 9684	8.667 6893	8.670 3932	60
1	8.656 7480	8.659 5209	8.662 2761	8.665 0139	8.667 7345	8.670 4381	59
2	8.656 7944	8.659 5669	8.662 3218	8.665 0594	8.667 7797	8.670 4831	58
3	8.656 8407	8.659 6130	8.662 3676	8.665 1048	8.667 8249	8.670 5280	57
4	8.656 8871	8.659 6590	8.662 4134	8.665 1503	8.667 8701	8.670 5729	56
5	8.656 9334	8.659 7051	8.662 4591	8.665 1958	8.667 9153	8.670 6178	55
6	8.656 9798	8.659 7511	8.662 5049	8.665 2413	8.667 9604	8.670 6627	54
7	8.657 0261	8.659 7972	8.662 5506	8.665 2867	8.668 0056	8.670 7076	53
8	8.657 0724	8.659 8432	8.662 5964	8.665 3322	8.668 0508	8.670 7525	52
9	8.657 1188	8.659 8892	8.662 6421	8.665 3776	8.668 0960	8.670 7974	51
10	8.657 1651	8.659 9353	8.662 6878	8.665 4231	8.668 1411	8.670 8422	50
11	8.657 2114	8.659 9813	8.662 7336	8.665 4685	8.668 1863	8.670 8871	49
12	8.657 2577	8.660 0273	8.662 7793	8.665 5139	8.668 2314	8.670 9320	48
13	8.657 3040	8.660 0733	8.662 8250	8.665 5594	8.668 2766	8.670 9769	47
14	8.657 3503	8.660 1193	8.662 8707	8.665 6048	8.668 3217	8.671 0217	46
15	8.657 3966	8.660 1653	8.662 9164	8.665 6502	8.668 3669	8.671 0666	45
16	8.657 4429	8.660 2113	8.662 9621	8.665 6956	8.668 4120	8.671 1114	44
17	8.657 4892	8.660 2573	8.663 0078	8.665 7411	8.668 4571	8.671 1563	43
18	8.657 5355	8.660 3033	8.663 0535	8.665 7865	8.668 5022	8.671 2011	42
19	8.657 5817	8.660 3493	8.663 0992	8.665 8319	8.668 5474	8.671 2460	41
20	8.657 6280	8.660 3952	8.663 1449	8.665 8773	8.668 5925	8.671 2908	40
21	8.657 6743	8.660 4412	8.663 1906	8.665 9227	8.668 6376	8.671 3356	39
22	8.657 7205	8.660 4872	8.663 2363	8.665 9680	8.668 6827	8.671 3805	38
23	8.657 7668	8.660 5331	8.663 2819	8.666 0134	8.668 7278	8.671 4253	37
24	8.657 8130	8.660 5791	8.663 3276	8.666 0588	8.668 7729	8.671 4701	36
25	8.657 8593	8.660 6250	8.663 3733	8.666 1042	8.668 8180	8.671 5149	35
26	8.657 9055	8.660 6710	8.663 4189	8.666 1495	8.668 8631	8.671 5597	34
27	8.657 9518	8.660 7169	8.663 4646	8.666 1949	8.668 9082	8.671 6045	33
28	8.657 9980	8.660 7629	8.663 5102	8.666 2403	8.668 9532	8.671 6493	32
29	8.658 0442	8.660 8088	8.663 5559	8.666 2856	8.668 9983	8.671 6941	31
30	8.658 0904	8.660 8547	8.663 6015	8.666 3310	8.669 0434	8.671 7389	30
31	8.658 1367	8.660 9007	8.663 6471	8.666 3763	8.669 0884	8.671 7837	29
32	8.658 1829	8.660 9466	8.663 6928	8.666 4217	8.669 1335	8.671 8284	28
33	8.658 2291	8.660 9925	8.663 7384	8.666 4670	8.669 1785	8.671 8732	27
34	8.658 2753	8.661 0384	8.663 7840	8.666 5123	8.669 2236	8.671 9180	26
35	8.658 3215	8.661 0843	8.663 8296	8.666 5577	8.669 2686	8.671 9628	25
36	8.658 3677	8.661 1302	8.663 8752	8.666 6030	8.669 3137	8.672 0075	24
37	8.658 4139	8.661 1761	8.663 9208	8.666 6483	8.669 3587	8.672 0523	23
38	8.658 4600	8.661 2220	8.663 9664	8.666 6936	8.669 4037	8.672 0970	22
39	8.658 5062	8.661 2679	8.664 0120	8.666 7389	8.669 4488	8.672 1418	21
40	8.658 5524	8.661 3137	8.664 0576	8.666 7842	8.669 4938	8.672 1865	20
41	8.658 5985	8.661 3596	8.664 1032	8.666 8295	8.669 5388	8.672 2313	19
42	8.658 6447	8.661 4055	8.664 1488	8.666 8748	8.669 5838	8.672 2760	18
43	8.658 6909	8.661 4513	8.664 1944	8.666 9201	8.669 6288	8.672 3207	17
44	8.658 7370	8.661 4972	8.664 2399	8.666 9654	8.669 6738	8.672 3654	16
45	8.658 7832	8.661 5431	8.664 2855	8.667 0107	8.669 7188	8.672 4102	15
46	8.658 8293	8.661 5889	8.664 3310	8.667 0559	8.669 7638	8.672 4549	14
47	8.658 8754	8.661 6348	8.664 3766	8.667 1012	8.669 8088	8.672 4996	13
48	8.658 9216	8.661 6806	8.664 4222	8.667 1465	8.669 8538	8.672 5443	12
49	8.658 9677	8.661 7264	8.664 4677	8.667 1917	8.669 8988	8.672 5890	11
50	8.659 0138	8.661 7723	8.664 5132	8.667 2370	8.669 9437	8.672 6337	10
51	8.659 0600	8.661 8181	8.664 5588	8.667 2822	8.669 9887	8.672 6784	9
52	8.659 1061	8.661 8639	8.664 6043	8.667 3275	8.670 0337	8.672 7231	8
53	8.659 1522	8.661 9097	8.664 6498	8.667 3727	8.670 0786	8.672 7677	7
54	8.659 1983	8.661 9555	8.664 6954	8.667 4180	8.670 1236	8.672 8124	6
55	8.659 2444	8.662 0013	8.664 7409	8.667 4632	8.670 1685	8.672 8571	5
56	8.659 2905	8.662 0471	8.664 7864	8.667 5084	8.670 2135	8.672 9018	4
57	8.659 3366	8.662 0929	8.664 8319	8.667 5537	8.670 2584	8.672 9464	3
58	8.659 3826	8.662 1387	8.664 8774	8.667 5989	8.670 3034	8.672 9911	2
59	8.659 4287	8.662 1845	8.664 9229	8.667 6441	8.670 3483	8.673 0357	1
60	8.659 4748	8.662 2303	8.664 9684	8.667 6893	8.670 3932	8.673 0804	0
″	23′	22′	21′	20′	19′	18′	″

cos 87°

″	36′	37′	38′	39′	40′	41′	″
0	8.657 1490	8.659 9279	8.662 6891	8.665 4331	8.668 1598	8.670 8697	60
1	8.657 1954	8.659 9740	8.662 7350	8.665 4787	8.668 2051	8.670 9147	59
2	8.657 2419	8.660 0202	8.662 7809	8.665 5242	8.668 2504	8.670 9597	58
3	8.657 2883	8.660 0663	8.662 8268	8.665 5698	8.668 2957	8.671 0047	57
4	8.657 3348	8.660 1125	8.662 8726	8.665 6154	8.668 3410	8.671 0497	56
5	8.657 3812	8.660 1586	8.662 9185	8.665 6610	8.668 3863	8.671 0947	55
6	8.657 4276	8.660 2048	8.662 9643	8.665 7065	8.668 4316	8.671 1397	54
7	8.657 4741	8.660 2509	8.663 0102	8.665 7521	8.668 4769	8.671 1847	53
8	8.657 5205	8.660 2970	8.663 0560	8.665 7976	8.668 5221	8.671 2297	52
9	8.657 5669	8.660 3432	8.663 1018	8.665 8432	8.668 5674	8.671 2747	51
10	8.657 6133	8.660 3893	8.663 1477	8.665 8887	8.668 6127	8.671 3197	50
11	8.657 6598	8.660 4354	8.663 1935	8.665 9343	8.668 6579	8.671 3647	49
12	8.657 7062	8.660 4815	8.663 2393	8.665 9798	8.668 7032	8.671 4096	48
13	8.657 7526	8.660 5276	8.663 2851	8.666 0253	8.668 7484	8.671 4546	47
14	8.657 7990	8.660 5737	8.663 3309	8.666 0708	8.668 7936	8.671 4996	46
15	8.657 8453	8.660 6198	8.663 3768	8.666 1164	8.668 8389	8.671 5445	45
16	8.657 8917	8.660 6659	8.663 4226	8.666 1619	8.668 8841	8.671 5895	44
17	8.657 9381	8.660 7120	8.663 4683	8.666 2074	8.668 9293	8.671 6344	43
18	8.657 9845	8.660 7581	8.663 5141	8.666 2529	8.668 9746	8.671 6793	42
19	8.658 0309	8.660 8042	8.663 5599	8.666 2984	8.669 0198	8.671 7243	41
20	8.658 0772	8.660 8502	8.663 6057	8.666 3439	8.669 0650	8.671 7692	40
21	8.658 1236	8.660 8963	8.663 6515	8.666 3894	8.669 1102	8.671 8142	39
22	8.658 1699	8.660 9424	8.663 6973	8.666 4349	8.669 1554	8.671 8591	38
23	8.658 2163	8.660 9884	8.663 7430	8.666 4804	8.669 2006	8.671 9040	37
24	8.658 2626	8.661 0345	8.663 7888	8.666 5258	8.669 2458	8.671 9489	36
25	8.658 3090	8.661 0805	8.663 8345	8.666 5713	8.669 2910	8.671 9938	35
26	8.658 3553	8.661 1266	8.663 8803	8.666 6168	8.669 3362	8.672 0387	34
27	8.658 4017	8.661 1726	8.663 9261	8.666 6622	8.669 3814	8.672 0836	33
28	8.658 4480	8.661 2186	8.663 9718	8.666 7077	8.669 4265	8.672 1285	32
29	8.658 4943	8.661 2647	8.664 0175	8.666 7531	8.669 4717	8.672 1734	31
30	8.658 5406	8.661 3107	8.664 0633	8.666 7986	8.669 5169	8.672 2183	30
31	8.658 5869	8.661 3567	8.664 1090	8.666 8440	8.669 5620	8.672 2632	29
32	8.658 6332	8.661 4027	8.664 1547	8.666 8895	8.669 6072	8.672 3081	28
33	8.658 6795	8.661 4487	8.664 2004	8.666 9349	8.669 6523	8.672 3529	27
34	8.658 7258	8.661 4947	8.664 2462	8.666 9803	8.669 6975	8.672 3978	26
35	8.658 7721	8.661 5407	8.664 2919	8.667 0258	8.669 7426	8.672 4427	25
36	8.658 8184	8.661 5867	8.664 3376	8.667 0712	8.669 7878	8.672 4875	24
37	8.658 8647	8.661 6327	8.664 3833	8.667 1166	8.669 8329	8.672 5324	23
38	8.658 9110	8.661 6787	8.664 4290	8.667 1620	8.669 8780	8.672 5772	22
39	8.658 9573	8.661 7247	8.664 4747	8.667 2074	8.669 9231	8.672 6221	21
40	8.659 0035	8.661 7707	8.664 5203	8.667 2528	8.669 9683	8.672 6669	20
41	8.659 0498	8.661 8166	8.664 5660	8.667 2982	8.670 0134	8.672 7118	19
42	8.659 0960	8.661 8626	8.664 6117	8.667 3436	8.670 0585	8.672 7566	18
43	8.659 1423	8.661 9086	8.664 6574	8.667 3890	8.670 1036	8.672 8014	17
44	8.659 1885	8.661 9545	8.664 7030	8.667 4344	8.670 1487	8.672 8462	16
45	8.659 2348	8.662 0005	8.664 7487	8.667 4797	8.670 1938	8.672 8911	15
46	8.659 2810	8.662 0465	8.664 7944	8.667 5251	8.670 2389	8.672 9359	14
47	8.659 3273	8.662 0924	8.664 8400	8.667 5705	8.670 2840	8.672 9807	13
48	8.659 3735	8.662 1383	8.664 8857	8.667 6159	8.670 3291	8.673 0255	12
49	8.659 4197	8.662 1842	8.664 9313	8.667 6612	8.670 3741	8.673 0703	11
50	8.659 4659	8.662 2301	8.664 9770	8.667 7066	8.670 4192	8.673 1151	10
51	8.659 5121	8.662 2761	8.665 0226	8.667 7519	8.670 4643	8.673 1599	9
52	8.659 5584	8.662 3220	8.665 0682	8.667 7973	8.670 5093	8.673 2047	8
53	8.659 6046	8.662 3679	8.665 1138	8.667 8426	8.670 5544	8.673 2494	7
54	8.659 6508	8.662 4138	8.665 1595	8.667 8879	8.670 5994	8.673 2942	6
55	8.659 6970	8.662 4597	8.665 2051	8.667 9333	8.670 6445	8.673 3390	5
56	8.659 7431	8.662 5056	8.665 2507	8.667 9786	8.670 6895	8.673 3837	4
57	8.659 7893	8.662 5515	8.665 2963	8.668 0239	8.670 7346	8.673 4285	3
58	8.659 8355	8.662 5974	8.665 3419	8.668 0692	8.670 7796	8.673 4733	2
59	8.659 8817	8.662 6433	8.665 3875	8.668 1145	8.670 8246	8.673 5180	1
60	8.659 9279	8.662 6891	8.665 4331	8.668 1598	8.670 8697	8.673 5628	0
″	23′	22′	21′	20′	19′	18′	″

sin 2°

″	42′	43′	44′	45′	46′	47′	″
0	8.673 0804	8.675 7510	8.678 4052	8.681 0433	8.683 6654	8.686 2718	60
1	8.673 1250	8.675 7954	8.678 4493	8.681 0871	8.683 7090	8.686 3151	59
2	8.673 1697	8.675 8397	8.678 4934	8.681 1310	8.683 7526	8.686 3584	58
3	8.673 2143	8.675 8841	8.678 5375	8.681 1748	8.683 7961	8.686 4017	57
4	8.673 2589	8.675 9284	8.678 5816	8.681 2186	8.683 8397	8.686 4450	56
5	8.673 3036	8.675 9728	8.678 6257	8.681 2624	8.683 8832	8.686 4883	55
6	8.673 3482	8.676 0171	8.678 6698	8.681 3062	8.683 9268	8.686 5315	54
7	8.673 3928	8.676 0615	8.678 7138	8.681 3500	8.683 9703	8.686 5748	53
8	8.673 4374	8.676 1058	8.678 7579	8.681 3938	8.684 0138	8.686 6181	52
9	8.673 4820	8.676 1502	8.678 8020	8.681 4376	8.684 0574	8.686 6614	51
10	8.673 5266	8.676 1945	8.678 8460	8.681 4814	8.684 1009	8.686 7046	50
11	8.673 5712	8.676 2388	8.678 8901	8.681 5252	8.684 1444	8.686 7479	49
12	8.673 6158	8.676 2831	8.678 9341	8.681 5690	8.684 1879	8.686 7912	48
13	8.673 6604	8.676 3274	8.678 9782	8.681 6128	8.684 2315	8.686 8344	47
14	8.673 7050	8.676 3718	8.679 0222	8.681 6566	8.684 2750	8.686 8777	46
15	8.673 7496	8.676 4161	8.679 0663	8.681 7003	8.684 3185	8.686 9209	45
16	8.673 7942	8.676 4604	8.679 1103	8.681 7441	8.684 3620	8.686 9641	44
17	8.673 8387	8.676 5047	8.679 1543	8.681 7878	8.684 4055	8.687 0074	43
18	8.673 8833	8.676 5490	8.679 1983	8.681 8316	8.684 4490	8.687 0506	42
19	8.673 9279	8.676 5933	8.679 2424	8.681 8754	8.684 4925	8.687 0938	41
20	8.673 9724	8.676 6375	8.679 2864	8.681 9191	8.684 5359	8.687 1371	40
21	8.674 0170	8.676 6818	8.679 3304	8.681 9629	8.684 5794	8.687 1803	39
22	8.674 0615	8.676 7261	8.679 3744	8.682 0066	8.684 6229	8.687 2235	38
23	8.674 1061	8.676 7704	8.679 4184	8.682 0503	8.684 6664	8.687 2667	37
24	8.674 1506	8.676 8146	8.679 4624	8.682 0941	8.684 7098	8.687 3099	36
25	8.674 1951	8.676 8589	8.679 5064	8.682 1378	8.684 7533	8.687 3531	35
26	8.674 2397	8.676 9031	8.679 5504	8.682 1815	8.684 7968	8.687 3963	34
27	8.674 2842	8.676 9474	8.679 5943	8.682 2252	8.684 8402	8.687 4395	33
28	8.674 3287	8.676 9917	8.679 6383	8.682 2689	8.684 8837	8.687 4827	32
29	8.674 3732	8.677 0359	8.679 6823	8.682 3126	8.684 9271	8.687 5259	31
30	8.674 4177	8.677 0801	8.679 7263	8.682 3563	8.684 9706	8.687 5691	30
31	8.674 4622	8.677 1244	8.679 7702	8.682 4000	8.685 0140	8.687 6123	29
32	8.674 5068	8.677 1686	8.679 8142	8.682 4437	8.685 0574	8.687 6554	28
33	8.674 5512	8.677 2128	8.679 8582	8.682 4874	8.685 1008	8.687 6986	27
34	8.674 5957	8.677 2570	8.679 9021	8.682 5311	8.685 1443	8.687 7418	26
35	8.674 6402	8.677 3013	8.679 9461	8.682 5748	8.685 1877	8.687 7849	25
36	8.674 6847	8.677 3455	8.679 9900	8.682 6185	8.685 2311	8.687 8281	24
37	8.674 7292	8.677 3897	8.680 0339	8.682 6621	8.685 2745	8.687 8712	23
38	8.674 7737	8.677 4339	8.680 0779	8.682 7058	8.685 3179	8.687 9144	22
39	8.674 8181	8.677 4781	8.680 1218	8.682 7495	8.685 3613	8.687 9575	21
40	8.674 8626	8.677 5223	8.680 1657	8.682 7931	8.685 4047	8.688 0007	20
41	8.674 9071	8.677 5665	8.680 2096	8.682 8368	8.685 4481	8.688 0438	19
42	8.674 9515	8.677 6107	8.680 2536	8.682 8804	8.685 4915	8.688 0869	18
43	8.674 9960	8.677 6548	8.680 2975	8.682 9241	8.685 5349	8.688 1300	17
44	8.675 0404	8.677 6990	8.680 3414	8.682 9677	8.685 5783	8.688 1732	16
45	8.675 0849	8.677 7432	8.680 3853	8.683 0114	8.685 6216	8.688 2163	15
46	8.675 1293	8.677 7874	8.680 4292	8.683 0550	8.685 6650	8.688 2594	14
47	8.675 1737	8.677 8315	8.680 4731	8.683 0986	8.685 7084	8.688 3025	13
48	8.675 2182	8.677 8757	8.680 5170	8.683 1423	8.685 7517	8.688 3456	12
49	8.675 2626	8.677 9198	8.680 5609	8.683 1859	8.685 7951	8.688 3887	11
50	8.675 3070	8.677 9640	8.680 6047	8.683 2295	8.685 8385	8.688 4318	10
51	8.675 3514	8.678 0081	8.680 6486	8.683 2731	8.685 8818	8.688 4749	9
52	8.675 3959	8.678 0523	8.680 6925	8.683 3167	8.685 9252	8.688 5180	8
53	8.675 4403	8.678 0964	8.680 7364	8.683 3603	8.685 9685	8.688 5611	7
54	8.675 4847	8.678 1405	8.680 7802	8.683 4039	8.686 0118	8.688 6041	6
55	8.675 5291	8.678 1847	8.680 8241	8.683 4475	8.686 0552	8.688 6472	5
56	8.675 5735	8.678 2288	8.680 8679	8.683 4911	8.686 0985	8.688 6903	4
57	8.675 6178	8.678 2729	8.680 9118	8.683 5347	8.686 1418	8.688 7334	3
58	8.675 6622	8.678 3170	8.680 9556	8.683 5783	8.686 1851	8.688 7764	2
59	8.675 7066	8.678 3611	8.680 9995	8.683 6218	8.686 2285	8.688 8195	1
60	8.675 7510	8.678 4052	8.681 0433	8.683 6654	8.686 2718	8.688 8625	0
″	17′	16′	15′	14′	13′	12′	″

cos 87°

″	42′	43′	44′	45′	46′	47′	″
0	8.673 5628	8.676 2393	8.678 8996	8.681 5437	8.684 1719	8.686 7844	60
1	8.673 6075	8.676 2838	8.678 9438	8.681 5877	8.684 2156	8.686 8278	59
2	8.673 6523	8.676 3283	8.678 9880	8.681 6316	8.684 2593	8.686 8712	58
3	8.673 6970	8.676 3727	8.679 0322	8.681 6755	8.684 3029	8.686 9146	57
4	8.673 7417	8.676 4172	8.679 0764	8.681 7194	8.684 3466	8.686 9580	56
5	8.673 7864	8.676 4617	8.679 1206	8.681 7634	8.684 3902	8.687 0014	55
6	8.673 8312	8.676 5061	8.679 1647	8.681 8073	8.684 4339	8.687 0448	54
7	8.673 8759	8.676 5505	8.679 2089	8.681 8512	8.684 4775	8.687 0882	53
8	8.673 9206	8.676 5950	8.679 2531	8.681 8951	8.684 5212	8.687 1316	52
9	8.673 9653	8.676 6394	8.679 2972	8.681 9390	8.684 5648	8.687 1749	51
10	8.674 0100	8.676 6839	8.679 3414	8.681 9829	8.684 6084	8.687 2183	50
11	8.674 0547	8.676 7283	8.679 3856	8.682 0268	8.684 6521	8.687 2617	49
12	8.674 0994	8.676 7727	8.679 4297	8.682 0706	8.684 6957	8.687 3050	48
13	8.674 1441	8.676 8171	8.679 4739	8.682 1145	8.684 7393	8.687 3484	47
14	8.674 1888	8.676 8615	8.679 5180	8.682 1584	8.684 7829	8.687 3917	46
15	8.674 2335	8.676 9059	8.679 5621	8.682 2023	8.684 8265	8.687 4351	45
16	8.674 2781	8.676 9503	8.679 6063	8.682 2461	8.684 8701	8.687 4784	44
17	8.674 3228	8.676 9947	8.679 6504	8.682 2900	8.684 9137	8.687 5218	43
18	8.674 3675	8.677 0391	8.679 6945	8.682 3339	8.684 9573	8.687 5651	42
19	8.674 4121	8.677 0835	8.679 7386	8.682 3777	8.685 0009	8.687 6084	41
20	8.674 4568	8.677 1279	8.679 7828	8.682 4216	8.685 0445	8.687 6518	40
21	8.674 5014	8.677 1723	8.679 8269	8.682 4654	8.685 0881	8.687 6951	39
22	8.674 5461	8.677 2167	8.679 8710	8.682 5092	8.685 1317	8.687 7384	38
23	8.674 5907	8.677 2610	8.679 9151	8.682 5531	8.685 1752	8.687 7817	37
24	8.674 6354	8.677 3054	8.679 9592	8.682 5969	8.685 2188	8.687 8250	36
25	8.674 6800	8.677 3498	8.680 0033	8.682 6407	8.685 2624	8.687 8683	35
26	8.674 7246	8.677 3941	8.680 0474	8.682 6846	8.685 3059	8.687 9116	34
27	8.674 7693	8.677 4385	8.680 0914	8.682 7284	8.685 3495	8.687 9549	33
28	8.674 8139	8.677 4828	8.680 1355	8.682 7722	8.685 3930	8.687 9982	32
29	8.674 8585	8.677 5272	8.680 1796	8.682 8160	8.685 4366	8.688 0415	31
30	8.674 9031	8.677 5715	8.680 2237	8.682 8598	8.685 4801	8.688 0848	30
31	8.674 9477	8.677 6158	8.680 2677	8.682 9036	8.685 5237	8.688 1281	29
32	8.674 9923	8.677 6602	8.680 3118	8.682 9474	8.685 5672	8.688 1713	28
33	8.675 0369	8.677 7045	8.680 3559	8.682 9912	8.685 6107	8.688 2146	27
34	8.675 0815	8.677 7488	8.680 3999	8.683 0350	8.685 6543	8.688 2579	26
35	8.675 1261	8.677 7931	8.680 4440	8.683 0788	8.685 6978	8.688 3011	25
36	8.675 1707	8.677 8374	8.680 4880	8.683 1226	8.685 7413	8.688 3444	24
37	8.675 2153	8.677 8818	8.680 5320	8.683 1663	8.685 7848	8.688 3877	23
38	8.675 2598	8.677 9261	8.680 5761	8.683 2101	8.685 8283	8.688 4309	22
39	8.675 3044	8.677 9704	8.680 6201	8.683 2539	8.685 8718	8.688 4742	21
40	8.675 3490	8.678 0147	8.680 6641	8.683 2976	8.685 9153	8.688 5174	20
41	8.675 3935	8.678 0589	8.680 7082	8.683 3414	8.685 9588	8.688 5606	19
42	8.675 4381	8.678 1032	8.680 7522	8.683 3851	8.686 0023	8.688 6039	18
43	8.675 4826	8.678 1475	8.680 7962	8.683 4289	8.686 0458	8.688 6471	17
44	8.675 5272	8.678 1918	8.680 8402	8.683 4726	8.686 0893	8.688 6903	16
45	8.675 5717	8.678 2361	8.680 8842	8.683 5164	8.686 1327	8.688 7335	15
46	8.675 6163	8.678 2803	8.680 9282	8.683 5601	8.686 1762	8.688 7768	14
47	8.675 6608	8.678 3246	8.680 9722	8.683 6038	8.686 2197	8.688 8200	13
48	8.675 7053	8.678 3688	8.681 0162	8.683 6476	8.686 2632	8.688 8632	12
49	8.675 7499	8.678 4131	8.681 0602	8.683 6913	8.686 3066	8.688 9064	11
50	8.675 7944	8.678 4573	8.681 1042	8.683 7350	8.686 3501	8.688 9496	10
51	8.675 8389	8.678 5016	8.681 1481	8.683 7787	8.686 3935	8.688 9928	9
52	8.675 8834	8.678 5458	8.681 1921	8.683 8224	8.686 4370	8.689 0360	8
53	8.675 9279	8.678 5901	8.681 2361	8.683 8661	8.686 4804	8.689 0791	7
54	8.675 9724	8.678 6343	8.681 2800	8.683 9098	8.686 5239	8.689 1223	6
55	8.676 0169	8.678 6785	8.681 3240	8.683 9535	8.686 5673	8.689 1655	5
56	8.676 0614	8.678 7228	8.681 3680	8.683 9972	8.686 6107	8.689 2087	4
57	8.676 1059	8.678 7670	8.681 4119	8.684 0409	8.686 6541	8.689 2518	3
58	8.676 1504	8.678 8112	8.681 4559	8.684 0846	8.686 6976	8.689 2950	2
59	8.676 1949	8.678 8554	8.681 4998	8.684 1283	8.686 7410	8.689 3382	1
60	8.676 2393	8.678 8996	8.681 5437	8.684 1719	8.686 7844	8.689 3813	0
″	17′	16′	15′	14′	13′	12′	″

cotg 87°

″	48′	49′	50′	51′	52′	53′	″
0	8.688 8625	8.691 4379	8.693 9980	8.696 5431	8.699 0734	8.701 5889	60
1	8.688 9056	8.691 4807	8.694 0406	8.696 5854	8.699 1154	8.701 6307	59
2	8.688 9486	8.691 5235	8.694 0831	8.696 6277	8.699 1574	8.701 6725	58
3	8.688 9917	8.691 5662	8.694 1256	8.696 6700	8.699 1995	8.701 7143	57
4	8.689 0347	8.691 6090	8.694 1682	8.696 7123	8.699 2415	8.701 7561	56
5	8.689 0777	8.691 6518	8.694 2107	8.696 7545	8.699 2835	8.701 7979	55
6	8.689 1207	8.691 6946	8.694 2532	8.696 7968	8.699 3256	8.701 8397	54
7	8.689 1638	8.691 7373	8.694 2957	8.696 8391	8.699 3676	8.701 8814	53
8	8.689 2068	8.691 7801	8.694 3382	8.696 8813	8.699 4096	8.701 9232	52
9	8.689 2498	8.691 8229	8.694 3807	8.696 9236	8.699 4516	8.701 9650	51
10	8.689 2928	8.691 8656	8.694 4232	8.696 9659	8.699 4936	8.702 0067	50
11	8.689 3358	8.691 9084	8.694 4657	8.697 0081	8.699 5356	8.702 0485	49
12	8.689 3788	8.691 9511	8.694 5082	8.697 0504	8.699 5776	8.702 0903	48
13	8.689 4218	8.691 9939	8.694 5507	8.697 0926	8.699 6196	8.702 1320	47
14	8.689 4648	8.692 0366	8.694 5932	8.697 1348	8.699 6616	8.702 1738	46
15	8.689 5078	8.692 0793	8.694 6357	8.697 1771	8.699 7036	8.702 2155	45
16	8.689 5508	8.692 1221	8.694 6782	8.697 2193	8.699 7456	8.702 2573	44
17	8.689 5938	8.692 1648	8.694 7207	8.697 2615	8.699 7876	8.702 2990	43
18	8.689 6367	8.692 2075	8.694 7631	8.697 3037	8.699 8296	8.702 3407	42
19	8.689 6797	8.692 2502	8.694 8056	8.697 3460	8.699 8715	8.702 3825	41
20	8.689 7227	8.692 2929	8.694 8480	8.697 3882	8.699 9135	8.702 4242	40
21	8.689 7656	8.692 3357	8.694 8905	8.697 4304	8.699 9555	8.702 4659	39
22	8.689 8086	8.692 3784	8.694 9330	8.697 4726	8.699 9974	8.702 5076	38
23	8.689 8516	8.692 4211	8.694 9754	8.697 5148	8.700 0394	8.702 5493	37
24	8.689 8945	8.692 4638	8.695 0179	8.697 5570	8.700 0813	8.702 5910	36
25	8.689 9374	8.692 5064	8.695 0603	8.697 5992	8.700 1233	8.702 6327	35
26	8.689 9804	8.692 5491	8.695 1027	8.697 6414	8.700 1652	8.702 6744	34
27	8.690 0233	8.692 5918	8.695 1452	8.697 6836	8.700 2072	8.702 7161	33
28	8.690 0663	8.692 6345	8.695 1876	8.697 7257	8.700 2491	8.702 7578	32
29	8.690 1092	8.692 6772	8.695 2300	8.697 7679	8.700 2910	8.702 7995	31
30	8.690 1521	8.692 7198	8.695 2724	8.697 8101	8.700 3330	8.702 8412	30
31	8.690 1950	8.692 7625	8.695 3149	8.697 8523	8.700 3749	8.702 8829	29
32	8.690 2380	8.692 8052	8.695 3573	8.697 8944	8.700 4168	8.702 9246	28
33	8.690 2809	8.692 8478	8.695 3997	8.697 9366	8.700 4587	8.702 9662	27
34	8.690 3238	8.692 8905	8.695 4421	8.697 9787	8.700 5006	8.703 0079	26
35	8.690 3667	8.692 9331	8.695 4845	8.698 0209	8.700 5425	8.703 0496	25
36	8.690 4096	8.692 9758	8.695 5269	8.698 0630	8.700 5844	8.703 0912	24
37	8.690 4525	8.693 0184	8.695 5693	8.698 1052	8.700 6263	8.703 1329	23
38	8.690 4954	8.693 0611	8.695 6117	8.698 1473	8.700 6682	8.703 1746	22
39	8.690 5382	8.693 1037	8.695 6540	8.698 1895	8.700 7101	8.703 2162	21
40	8.690 5811	8.693 1463	8.695 6964	8.698 2316	8.700 7520	8.703 2578	20
41	8.690 6240	8.693 1889	8.695 7388	8.698 2737	8.700 7939	8.703 2995	19
42	8.690 6669	8.693 2316	8.695 7812	8.698 3158	8.700 8358	8.703 3411	18
43	8.690 7097	8.693 2742	8.695 8235	8.698 3580	8.700 8776	8.703 3828	17
44	8.690 7526	8.693 3168	8.695 8659	8.698 4001	8.700 9195	8.703 4244	16
45	8.690 7955	8.693 3594	8.695 9082	8.698 4422	8.700 9614	8.703 4660	15
46	8.690 8383	8.693 4020	8.695 9506	8.698 4843	8.701 0032	8.703 5076	14
47	8.690 8812	8.693 4446	8.695 9929	8.698 5264	8.701 0451	8.703 5493	13
48	8.690 9240	8.693 4872	8.696 0353	8.698 5685	8.701 0870	8.703 5909	12
49	8.690 9669	8.693 5298	8.696 0776	8.698 6106	8.701 1288	8.703 6325	11
50	8.691 0097	8.693 5724	8.696 1200	8.698 6527	8.701 1707	8.703 6741	10
51	8.691 0526	8.693 6150	8.696 1623	8.698 6948	8.701 2125	8.703 7157	9
52	8.691 0954	8.693 6575	8.696 2046	8.698 7368	8.701 2543	8.703 7573	8
53	8.691 1382	8.693 7001	8.696 2470	8.698 7789	8.701 2962	8.703 7989	7
54	8.691 1810	8.693 7427	8.696 2893	8.698 8210	8.701 3380	8.703 8405	6
55	8.691 2239	8.693 7853	8.696 3316	8.698 8631	8.701 3798	8.703 8821	5
56	8.691 2667	8.693 8278	8.696 3739	8.698 9051	8.701 4216	8.703 9236	4
57	8.691 3095	8.693 8704	8.696 4162	8.698 9472	8.701 4635	8.703 9652	3
58	8.691 3523	8.693 9129	8.696 4585	8.698 9893	8.701 5053	8.704 0068	2
59	8.691 3951	8.693 9555	8.696 5008	8.699 0313	8.701 5471	8.704 0484	1
60	8.691 4379	8.693 9980	8.696 5431	8.699 0734	8.701 5889	8.704 0899	0
″	11′	10′	9′	8′	7′	6′	″

tang 2°

″	48′	49′	50′	51′	52′	53′	″
0	8.689 3813	8.691 9629	8.694 5292	8.697 0806	8.699 6172	8.702 1390	60
1	8.689 4245	8.692 0058	8.694 5719	8.697 1230	8.699 6593	8.702 1810	59
2	8.689 4676	8.692 0487	8.694 6145	8.697 1654	8.699 7015	8.702 2229	58
3	8.689 5108	8.692 0916	8.694 6572	8.697 2078	8.699 7436	8.702 2648	57
4	8.689 5539	8.692 1344	8.694 6998	8.697 2502	8.699 7857	8.702 3067	56
5	8.689 5970	8.692 1773	8.694 7424	8.697 2926	8.699 8279	8.702 3486	55
6	8.689 6402	8.692 2202	8.694 7851	8.697 3349	8.699 8700	8.702 3904	54
7	8.689 6833	8.692 2631	8.694 8277	8.697 3773	8.699 9121	8.702 4323	53
8	8.689 7264	8.692 3059	8.694 8703	8.697 4197	8.699 9543	8.702 4742	52
9	8.689 7695	8.692 3488	8.694 9129	8.697 4620	8.699 9964	8.702 5161	51
10	8.689 8126	8.692 3917	8.694 9555	8.697 5044	8.700 0385	8.702 5580	50
11	8.689 8557	8.692 4345	8.694 9981	8.697 5468	8.700 0806	8.702 5998	49
12	8.689 8989	8.692 4774	8.695 0407	8.697 5891	8.700 1227	8.702 6417	48
13	8.689 9420	8.692 5202	8.695 0833	8.697 6315	8.700 1648	8.702 6835	47
14	8.689 9850	8.692 5630	8.695 1259	8.697 6738	8.700 2069	8.702 7254	46
15	8.690 0281	8.692 6059	8.695 1685	8.697 7161	8.700 2490	8.702 7673	45
16	8.690 0712	8.692 6487	8.695 2111	8.697 7585	8.700 2911	8.702 8091	44
17	8.690 1143	8.692 6915	8.695 2537	8.697 8008	8.700 3332	8.702 8509	43
18	8.690 1574	8.692 7344	8.695 2962	8.697 8431	8.700 3753	8.702 8928	42
19	8.690 2005	8.692 7772	8.695 3388	8.697 8855	8.700 4173	8.702 9346	41
20	8.690 2435	8.692 8200	8.695 3814	8.697 9278	8.700 4594	8.702 9765	40
21	8.690 2866	8.692 8628	8.695 4239	8.697 9701	8.700 5015	8.703 0183	39
22	8.690 3297	8.692 9056	8.695 4665	8.698 0124	8.700 5435	8.703 0601	38
23	8.690 3727	8.692 9484	8.695 5090	8.698 0547	8.700 5856	8.703 1019	37
24	8.690 4158	8.692 9912	8.695 5516	8.698 0970	8.700 6277	8.703 1437	36
25	8.690 4588	8.693 0340	8.695 5941	8.698 1393	8.700 6697	8.703 1856	35
26	8.690 5019	8.693 0768	8.695 6367	8.698 1816	8.700 7118	8.703 2274	34
27	8.690 5449	8.693 1196	8.695 6792	8.698 2239	8.700 7538	8.703 2692	33
28	8.690 5879	8.693 1624	8.695 7217	8.698 2662	8.700 7959	8.703 3110	32
29	8.690 6310	8.693 2052	8.695 7643	8.698 3085	8.700 8379	8.703 3528	31
30	8.690 6740	8.693 2479	8.695 8068	8.698 3507	8.700 8799	8.703 3946	30
31	8.690 7170	8.693 2907	8.695 8493	8.698 3930	8.700 9220	8.703 4363	29
32	8.690 7600	8.693 3335	8.695 8918	8.698 4353	8.700 9640	8.703 4781	28
33	8.690 8031	8.693 3762	8.695 9343	8.698 4775	8.701 0060	8.703 5199	27
34	8.690 8461	8.693 4190	8.695 9769	8.698 5198	8.701 0480	8.703 5617	26
35	8.690 8891	8.693 4618	8.696 0194	8.698 5621	8.701 0900	8.703 6035	25
36	8.690 9321	8.693 5045	8.696 0619	8.698 6043	8.701 1320	8.703 6452	24
37	8.690 9751	8.693 5473	8.696 1044	8.698 6466	8.701 1740	8.703 6870	23
38	8.691 0181	8.693 5900	8.696 1468	8.698 6888	8.701 2160	8.703 7287	22
39	8.691 0611	8.693 6327	8.696 1893	8.698 7310	8.701 2580	8.703 7705	21
40	8.691 1041	8.693 6755	8.696 2318	8.698 7733	8.701 3000	8.703 8122	20
41	8.691 1470	8.693 7182	8.696 2743	8.698 8155	8.701 3420	8.703 8540	19
42	8.691 1900	8.693 7609	8.696 3168	8.698 8577	8.701 3840	8.703 8957	18
43	8.691 2330	8.693 8036	8.696 3592	8.698 9000	8.701 4260	8.703 9375	17
44	8.691 2760	8.693 8464	8.696 4017	8.698 9422	8.701 4680	8.703 9792	16
45	8.691 3189	8.693 8891	8.696 4442	8.698 9844	8.701 5099	8.704 0209	15
46	8.691 3619	8.693 9318	8.696 4866	8.699 0266	8.701 5519	8.704 0627	14
47	8.691 4048	8.693 9745	8.696 5291	8.699 0688	8.701 5939	8.704 1044	13
48	8.691 4478	8.694 0172	8.696 5715	8.699 1110	8.701 6358	8.704 1461	12
49	8.691 4907	8.694 0599	8.696 6140	8.699 1532	8.701 6778	8.704 1878	11
50	8.691 5337	8.694 1026	8.696 6564	8.699 1954	8.701 7197	8.704 2295	10
51	8.691 5766	8.694 1453	8.696 6989	8.699 2376	8.701 7617	8.704 2713	9
52	8.691 6195	8.694 1879	8.696 7413	8.699 2798	8.701 8036	8.704 3130	8
53	8.691 6625	8.694 2306	8.696 7837	8.699 3220	8.701 8456	8.704 3547	7
54	8.691 7054	8.694 2733	8.696 8262	8.699 3642	8.701 8875	8.704 3964	6
55	8.691 7483	8.694 3160	8.696 8686	8.699 4063	8.701 9294	8.704 4380	5
56	8.691 7912	8.694 3586	8.696 9110	8.699 4485	8.701 9714	8.704 4797	4
57	8.691 8342	8.694 4013	8.696 9534	8.699 4907	8.702 0133	8.704 5214	3
58	8.691 8771	8.694 4439	8.696 9958	8.699 5328	8.702 0552	8.704 5631	2
59	8.691 9200	8.694 4866	8.697 0382	8.699 5750	8.702 0971	8.704 6048	1
60	8.691 9629	8.694 5292	8.697 0806	8.699 6172	8.702 1390	8.704 6465	0
″	11′	10′	9′	8′	7′	6′	″

cotg 87°

″	54′	55′	56′	57′	58′	59′	″
0	8.704 0899	8.706 5766	8.709 0490	8.711 5075	8.713 9520	8.716 3829	60
1	8.704 1315	8.706 6179	8.709 0901	8.711 5483	8.713 9927	8.716 4233	59
2	8.704 1730	8.706 6592	8.709 1312	8.711 5892	8.714 0333	8.716 4637	58
3	8.704 2146	8.706 7005	8.709 1723	8.711 6300	8.714 0739	8.716 5041	57
4	8.704 2561	8.706 7419	8.709 2134	8.711 6709	8.714 1145	8.716 5445	56
5	8.704 2977	8.706 7832	8.709 2545	8.711 7117	8.714 1551	8.716 5848	55
6	8.704 3392	8.706 8245	8.709 2955	8.711 7526	8.714 1957	8.716 6252	54
7	8.704 3808	8.706 8658	8.709 3366	8.711 7934	8.714 2363	8.716 6656	53
8	8.704 4223	8.706 9071	8.709 3776	8.711 8342	8.714 2769	8.716 7060	52
9	8.704 4638	8.706 9484	8.709 4187	8.711 8751	8.714 3175	8.716 7463	51
10	8.704 5054	8.706 9896	8.709 4598	8.711 9159	8.714 3581	8.716 7867	50
11	8.704 5469	8.707 0309	8.709 5008	8.711 9567	8.714 3987	8.716 8271	49
12	8.704 5884	8.707 0722	8.709 5419	8.711 9975	8.714 4393	8.716 8674	48
13	8.704 6299	8.707 1135	8.709 5829	8.712 0383	8.714 4799	8.716 9078	47
14	8.704 6714	8.707 1548	8.709 6239	8.712 0791	8.714 5205	8.716 9481	46
15	8.704 7129	8.707 1960	8.709 6650	8.712 1199	8.714 5610	8.716 9885	45
16	8.704 7544	8.707 2373	8.709 7060	8.712 1607	8.714 6016	8.717 0288	44
17	8.704 7959	8.707 2785	8.709 7470	8.712 2015	8.714 6422	8.717 0692	43
18	8.704 8374	8.707 3198	8.709 7880	8.712 2423	8.714 6827	8.717 1095	42
19	8.704 8789	8.707 3611	8.709 8291	8.712 2831	8.714 7233	8.717 1498	41
20	8.704 9204	8.707 4023	8.709 8701	8.712 3239	8.714 7638	8.717 1901	40
21	8.704 9619	8.707 4436	8.709 9111	8.712 3647	8.714 8044	8.717 2305	39
22	8.705 0034	8.707 4848	8.709 9521	8.712 4054	8.714 8449	8.717 2708	38
23	8.705 0448	8.707 5260	8.709 9931	8.712 4462	8.714 8855	8.717 3111	37
24	8.705 0863	8.707 5673	8.710 0341	8.712 4870	8.714 9260	8.717 3514	36
25	8.705 1278	8.707 6085	8.710 0751	8.712 5277	8.714 9666	8.717 3917	35
26	8.705 1692	8.707 6497	8.710 1161	8.712 5685	8.715 0071	8.717 4320	34
27	8.705 2107	8.707 6909	8.710 1571	8.712 6092	8.715 0476	8.717 4723	33
28	8.705 2521	8.707 7322	8.710 1981	8.712 6500	8.715 0881	8.717 5126	32
29	8.705 2936	8.707 7734	8.710 2390	8.712 6907	8.715 1287	8.717 5529	31
30	8.705 3350	8.707 8146	8.710 2800	8.712 7315	8.715 1692	8.717 5932	30
31	8.705 3765	8.707 8558	8.710 3210	8.712 7722	8.715 2097	8.717 6335	29
32	8.705 4179	8.707 8970	8.710 3620	8.712 8130	8.715 2502	8.717 6738	28
33	8.705 4593	8.707 9382	8.710 4029	8.712 8537	8.715 2907	8.717 7141	27
34	8.705 5008	8.707 9794	8.710 4439	8.712 8944	8.715 3312	8.717 7543	26
35	8.705 5422	8.708 0206	8.710 4848	8.712 9352	8.715 3717	8.717 7946	25
36	8.705 5836	8.708 0618	8.710 5258	8.712 9759	8.715 4122	8.717 8349	24
37	8.705 6250	8.708 1029	8.710 5667	8.713 0166	8.715 4527	8.717 8751	23
38	8.705 6665	8.708 1441	8.710 6077	8.713 0573	8.715 4932	8.717 9154	22
39	8.705 7079	8.708 1853	8.710 6486	8.713 0980	8.715 5336	8.717 9557	21
40	8.705 7493	8.708 2265	8.710 6896	8.713 1387	8.715 5741	8.717 9959	20
41	8.705 7907	8.708 2676	8.710 7305	8.713 1794	8.715 6146	8.718 0362	19
42	8.705 8321	8.708 3088	8.710 7714	8.713 2201	8.715 6551	8.718 0764	18
43	8.705 8735	8.708 3499	8.710 8123	8.713 2608	8.715 6955	8.718 1166	17
44	8.705 9149	8.708 3911	8.710 8533	8.713 3015	8.715 7360	8.718 1569	16
45	8.705 9563	8.708 4323	8.710 8942	8.713 3422	8.715 7765	8.718 1971	15
46	8.705 9976	8.708 4734	8.710 9351	8.713 3829	8.715 8169	8.718 2373	14
47	8.706 0390	8.708 5145	8.710 9760	8.713 4236	8.715 8574	8.718 2776	13
48	8.706 0804	8.708 5557	8.711 0169	8.713 4642	8.715 8978	8.718 3178	12
49	8.706 1218	8.708 5968	8.711 0578	8.713 5049	8.715 9383	8.718 3580	11
50	8.706 1631	8.708 6380	8.711 0987	8.713 5456	8.715 9787	8.718 3982	10
51	8.706 2045	8.708 6791	8.711 1396	8.713 5862	8.716 0191	8.718 4384	9
52	8.706 2458	8.708 7202	8.711 1805	8.713 6269	8.716 0596	8.718 4786	8
53	8.706 2872	8.708 7613	8.711 2214	8.713 6676	8.716 1000	8.718 5188	7
54	8.706 3286	8.708 8024	8.711 2623	8.713 7082	8.716 1404	8.718 5590	6
55	8.706 3699	8.708 8435	8.711 3031	8.713 7489	8.716 1808	8.718 5992	5
56	8.706 4112	8.708 8847	8.711 3440	8.713 7895	8.716 2213	8.718 6394	4
57	8.706 4526	8.708 9258	8.711 3849	8.713 8301	8.716 2617	8.718 6796	3
58	8.706 4939	8.708 9669	8.711 4258	8.713 8708	8.716 3021	8.718 7198	2
59	8.706 5353	8.709 0080	8.711 4666	8.713 9114	8.716 3425	8.718 7600	1
60	8.706 5766	8.709 0490	8.711 5075	8.713 9520	8.716 3829	8.718 8002	0
″	5′	4′	3′	2′	1′	0′	″

tang 2°

″	54′	55′	56′	57′	58′	59′	″
0	8.704 6465	8.707 1395	8.709 6185	8.712 0834	8.714 5345	8.716 9719	60
1	8.704 6881	8.707 1810	8.709 6597	8.712 1243	8.714 5752	8.717 0124	59
2	8.704 7298	8.707 2224	8.709 7008	8.712 1653	8.714 6159	8.717 0529	58
3	8.704 7714	8.707 2638	8.709 7420	8.712 2063	8.714 6567	8.717 0934	57
4	8.704 8131	8.707 3052	8.709 7832	8.712 2472	8.714 6974	8.717 1339	56
5	8.704 8548	8.707 3466	8.709 8244	8.712 2882	8.714 7381	8.717 1744	55
6	8.704 8964	8.707 3881	8.709 8656	8.712 3291	8.714 7788	8.717 2149	54
7	8.704 9380	8.707 4295	8.709 9067	8.712 3701	8.714 8195	8.717 2554	53
8	8.704 9797	8.707 4709	8.709 9479	8.712 4110	8.714 8602	8.717 2958	52
9	8.705 0213	8.707 5123	8.709 9891	8.712 4519	8.714 9010	8.717 3363	51
10	8.705 0630	8.707 5537	8.710 0302	8.712 4929	8.714 9417	8.717 3768	50
11	8.705 1046	8.707 5951	8.710 0714	8.712 5338	8.714 9824	8.717 4173	49
12	8.705 1462	8.707 6364	8.710 1126	8.712 5747	8.715 0230	8.717 4577	48
13	8.705 1878	8.707 6778	8.710 1537	8.712 6156	8.715 0637	8.717 4982	47
14	8.705 2294	8.707 7192	8.710 1949	8.712 6565	8.715 1044	8.717 5387	46
15	8.705 2711	8.707 7606	8.710 2360	8.712 6974	8.715 1451	8.717 5791	45
16	8.705 3127	8.707 8020	8.710 2771	8.712 7384	8.715 1858	8.717 6196	44
17	8.705 3543	8.707 8433	8.710 3183	8.712 7793	8.715 2265	8.717 6600	43
18	8.705 3959	8.707 8847	8.710 3594	8.712 8202	8.715 2671	8.717 7005	42
19	8.705 4375	8.707 9260	8.710 4005	8.712 8611	8.715 3078	8.717 7409	41
20	8.705 4791	8.707 9674	8.710 4416	8.712 9019	8.715 3485	8.717 7813	40
21	8.705 5206	8.708 0088	8.710 4828	8.712 9428	8.715 3891	8.717 8218	39
22	8.705 5622	8.708 0501	8.710 5239	8.712 9837	8.715 4298	8.717 8622	38
23	8.705 6038	8.708 0914	8.710 5650	8.713 0246	8.715 4704	8.717 9026	37
24	8.705 6454	8.708 1328	8.710 6061	8.713 0655	8.715 5111	8.717 9430	36
25	8.705 6870	8.708 1741	8.710 6472	8.713 1063	8.715 5517	8.717 9835	35
26	8.705 7285	8.708 2155	8.710 6883	8.713 1472	8.715 5924	8.718 0239	34
27	8.705 7701	8.708 2568	8.710 7294	8.713 1881	8.715 6330	8.718 0643	33
28	8.705 8117	8.708 2981	8.710 7705	8.713 2289	8.715 6736	8.718 1047	32
29	8.705 8532	8.708 3394	8.710 8116	8.713 2698	8.715 7143	8.718 1451	31
30	8.705 8948	8.708 3808	8.710 8527	8.713 3106	8.715 7549	8.718 1855	30
31	8.705 9363	8.708 4221	8.710 8937	8.713 3515	8.715 7955	8.718 2259	29
32	8.705 9779	8.708 4634	8.710 9348	8.713 3923	8.715 8361	8.718 2663	28
33	8.706 0194	8.708 5047	8.710 9759	8.713 4332	8.715 8767	8.718 3067	27
34	8.706 0609	8.708 5460	8.711 0170	8.713 4740	8.715 9173	8.718 3471	26
35	8.706 1025	8.708 5873	8.711 0580	8.713 5149	8.715 9579	8.718 3874	25
36	8.706 1440	8.708 6286	8.711 0991	8.713 5557	8.715 9985	8.718 4278	24
37	8.706 1855	8.708 6699	8.711 1401	8.713 5965	8.716 0391	8.718 4682	23
38	8.706 2271	8.708 7111	8.711 1812	8.713 6373	8.716 0797	8.718 5086	22
39	8.706 2686	8.708 7524	8.711 2222	8.713 6782	8.716 1203	8.718 5489	21
40	8.706 3101	8.708 7937	8.711 2633	8.713 7190	8.716 1609	8.718 5893	20
41	8.706 3516	8.708 8350	8.711 3043	8.713 7598	8.716 2015	8.718 6297	19
42	8.706 3931	8.708 8763	8.711 3454	8.713 8006	8.716 2421	8.718 6700	18
43	8.706 4346	8.708 9175	8.711 3864	8.713 8414	8.716 2827	8.718 7104	17
44	8.706 4761	8.708 9588	8.711 4274	8.713 8822	8.716 3232	8.718 7507	16
45	8.706 5176	8.709 0000	8.711 4685	8.713 9230	8.716 3638	8.718 7910	15
46	8.706 5591	8.709 0413	8.711 5095	8.713 9638	8.716 4044	8.718 8314	14
47	8.706 6006	8.709 0825	8.711 5505	8.714 0046	8.716 4449	8.718 8717	13
48	8.706 6421	8.709 1238	8.711 5915	8.714 0454	8.716 4855	8.718 9121	12
49	8.706 6835	8.709 1650	8.711 6325	8.714 0861	8.716 5260	8.718 9524	11
50	8.706 7250	8.709 2063	8.711 6735	8.714 1269	8.716 5666	8.718 9927	10
51	8.706 7665	8.709 2475	8.711 7145	8.714 1677	8.716 6071	8.719 0330	9
52	8.706 8079	8.709 2887	8.711 7555	8.714 2085	8.716 6477	8.719 0734	8
53	8.706 8494	8.709 3300	8.711 7965	8.714 2492	8.716 6882	8.719 1137	7
54	8.706 8909	8.709 3712	8.711 8375	8.714 2900	8.716 7288	8.719 1540	6
55	8.706 9323	8.709 4124	8.711 8785	8.714 3307	8.716 7693	8.719 1943	5
56	8.706 9738	8.709 4536	8.711 9195	8.714 3715	8.716 8098	8.719 2346	4
57	8.707 0152	8.709 4948	8.711 9605	8.714 4122	8.716 8503	8.719 2749	3
58	8.707 0567	8.709 5361	8.712 0014	8.714 4530	8.716 8909	8.719 3152	2
59	8.707 0981	8.709 5773	8.712 0424	8.714 4937	8.716 9314	8.719 3555	1
60	8.707 1395	8.709 6185	8.712 0834	8.714 5345	8.716 9719	8.719 3958	0
″	5′	4′	3′	2′	1′	0′	″

cotg 87°

sin 3°

″	0′	1′	2′	3′	4′	5′	″
0	8.718 8002	8.721 2040	8.723 5946	8.725 9721	8.728 3366	8.730 6882	60
1	8.718 8403	8.721 2440	8.723 6343	8.726 0116	8.728 3759	8.730 7273	59
2	8.718 8805	8.721 2839	8.723 6741	8.726 0511	8.728 4152	8.730 7664	58
3	8.718 9207	8.721 3239	8.723 7138	8.726 0906	8.728 4544	8.730 8055	57
4	8.718 9608	8.721 3638	8.723 7535	8.726 1301	8.728 4937	8.730 8445	56
5	8.719 0010	8.721 4037	8.723 7932	8.726 1696	8.728 5330	8.730 8836	55
6	8.719 0412	8.721 4437	8.723 8329	8.726 2091	8.728 5723	8.730 9227	54
7	8.719 0813	8.721 4836	8.723 8727	8.726 2486	8.728 6116	8.730 9617	53
8	8.719 1215	8.721 5235	8.723 9124	8.726 2881	8.728 6509	8.731 0008	52
9	8.719 1616	8.721 5635	8.723 9521	8.726 3276	8.728 6901	8.731 0399	51
10	8.719 2017	8.721 6034	8.723 9918	8.726 3671	8.728 7294	8.731 0789	50
11	8.719 2419	8.721 6433	8.724 0315	8.726 4065	8.728 7687	8.731 1180	49
12	8.719 2820	8.721 6832	8.724 0711	8.726 4460	8.728 8079	8.731 1570	48
13	8.719 3221	8.721 7231	8.724 1108	8.726 4855	8.728 8472	8.731 1961	47
14	8.719 3623	8.721 7630	8.724 1505	8.726 5249	8.728 8864	8.731 2351	46
15	8.719 4024	8.721 8029	8.724 1902	8.726 5644	8.728 9257	8.731 2741	45
16	8.719 4425	8.721 8428	8.724 2299	8.726 6039	8.728 9649	8.731 3132	44
17	8.719 4826	8.721 8827	8.724 2696	8.726 6433	8.729 0042	8.731 3522	43
18	8.719 5227	8.721 9226	8.724 3092	8.726 6828	8.729 0434	8.731 3912	42
19	8.719 5628	8.721 9625	8.724 3489	8.726 7222	8.729 0826	8.731 4302	41
20	8.719 6029	8.722 0024	8.724 3886	8.726 7617	8.729 1219	8.731 4693	40
21	8.719 6430	8.722 0422	8.724 4282	8.726 8011	8.729 1611	8.731 5083	39
22	8.719 6831	8.722 0821	8.724 4679	8.726 8406	8.729 2003	8.731 5473	38
23	8.719 7232	8.722 1220	8.724 5075	8.726 8800	8.729 2395	8.731 5863	37
24	8.719 7633	8.722 1618	8.724 5472	8.726 9194	8.729 2788	8.731 6253	36
25	8.719 8034	8.722 2017	8.724 5868	8.726 9588	8.729 3180	8.731 6643	35
26	8.719 8435	8.722 2416	8.724 6264	8.726 9983	8.729 3572	8.731 7033	34
27	8.719 8836	8.722 2814	8.724 6661	8.727 0377	8.729 3964	8.731 7423	33
28	8.719 9236	8.722 3213	8.724 7057	8.727 0771	8.729 4356	8.731 7813	32
29	8.719 9637	8.722 3611	8.724 7453	8.727 1165	8.729 4748	8.731 8203	31
30	8.720 0038	8.722 4010	8.724 7850	8.727 1559	8.729 5140	8.731 8593	30
31	8.720 0438	8.722 4408	8.724 8246	8.727 1953	8.729 5532	8.731 8982	29
32	8.720 0839	8.722 4806	8.724 8642	8.727 2347	8.729 5924	8.731 9372	28
33	8.720 1239	8.722 5205	8.724 9038	8.727 2741	8.729 6315	8.731 9762	27
34	8.720 1640	8.722 5603	8.724 9434	8.727 3135	8.729 6707	8.732 0152	26
35	8.720 2040	8.722 6001	8.724 9831	8.727 3529	8.729 7099	8.732 0541	25
36	8.720 2441	8.722 6400	8.725 0227	8.727 3923	8.729 7491	8.732 0931	24
37	8.720 2841	8.722 6798	8.725 0623	8.727 4317	8.729 7883	8.732 1320	23
38	8.720 3242	8.722 7196	8.725 1019	8.727 4711	8.729 8274	8.732 1710	22
39	8.720 3642	8.722 7594	8.725 1414	8.727 5105	8.729 8666	8.732 2100	21
40	8.720 4042	8.722 7992	8.725 1810	8.727 5498	8.729 9057	8.732 2489	20
41	8.720 4442	8.722 8390	8.725 2206	8.727 5892	8.729 9449	8.732 2879	19
42	8.720 4843	8.722 8788	8.725 2602	8.727 6286	8.729 9841	8.732 3268	18
43	8.720 5243	8.722 9186	8.725 2998	8.727 6679	8.730 0232	8.732 3657	17
44	8.720 5643	8.722 9584	8.725 3394	8.727 7073	8.730 0623	8.732 4047	16
45	8.720 6043	8.722 9982	8.725 3789	8.727 7467	8.730 1015	8.732 4436	15
46	8.720 6443	8.723 0380	8.725 4185	8.727 7860	8.730 1406	8.732 4825	14
47	8.720 6843	8.723 0778	8.725 4581	8.727 8254	8.730 1798	8.732 5215	13
48	8.720 7243	8.723 1175	8.725 4976	8.727 8647	8.730 2189	8.732 5604	12
49	8.720 7643	8.723 1573	8.725 5372	8.727 9040	8.730 2580	8.732 5993	11
50	8.720 8043	8.723 1971	8.725 5767	8.727 9434	8.730 2972	8.732 6382	10
51	8.720 8443	8.723 2369	8.725 6163	8.727 9827	8.730 3363	8.732 6771	9
52	8.720 8843	8.723 2766	8.725 6558	8.728 0220	8.730 3754	8.732 7160	8
53	8.720 9243	8.723 3164	8.725 6954	8.728 0614	8.730 4145	8.732 7549	7
54	8.720 9642	8.723 3561	8.725 7349	8.728 1007	8.730 4536	8.732 7938	6
55	8.721 0042	8.723 3959	8.725 7745	8.728 1400	8.730 4927	8.732 8327	5
56	8.721 0442	8.723 4356	8.725 8140	8.728 1793	8.730 5318	8.732 8716	4
57	8.721 0841	8.723 4754	8.725 8535	8.728 2186	8.730 5709	8.732 9105	3
58	8.721 1241	8.723 5151	8.725 8930	8.728 2580	8.730 6100	8.732 9494	2
59	8.721 1641	8.723 5549	8.725 9326	8.728 2973	8.730 6491	8.732 9883	1
60	8.721 2040	8.723 5946	8.725 9721	8.728 3366	8.730 6882	8.733 0272	0
″	59′	58′	57′	56′	55′	54′	″

cos 86°

tang 3°

″	0′	1′	2′	3′	4′	5′	″
0	8.719 3958	8.721 8063	8.724 2035	8.726 5877	8.728 9589	8.731 3174	60
1	8.719 4360	8.721 8463	8.724 2434	8.726 6273	8.728 9983	8.731 3566	59
2	8.719 4763	8.721 8864	8.724 2832	8.726 6669	8.729 0378	8.731 3958	58
3	8.719 5166	8.721 9264	8.724 3230	8.726 7066	8.729 0772	8.731 4350	57
4	8.719 5569	8.721 9665	8.724 3629	8.726 7462	8.729 1166	8.731 4741	56
5	8.719 5971	8.722 0065	8.724 4027	8.726 7858	8.729 1560	8.731 5133	55
6	8.719 6374	8.722 0466	8.724 4425	8.726 8254	8.729 1954	8.731 5525	54
7	8.719 6777	8.722 0866	8.724 4823	8.726 8650	8.729 2347	8.731 5917	53
8	8.719 7179	8.722 1267	8.724 5222	8.726 9046	8.729 2741	8.731 6309	52
9	8.719 7582	8.722 1667	8.724 5620	8.726 9442	8.729 3135	8.731 6700	51
10	8.719 7984	8.722 2067	8.724 6018	8.726 9838	8.729 3529	8.731 7092	50
11	8.719 8387	8.722 2467	8.724 6416	8.727 0234	8.729 3923	8.731 7484	49
12	8.719 8789	8.722 2868	8.724 6814	8.727 0630	8.729 4316	8.731 7875	48
13	8.719 9192	8.722 3268	8.724 7212	8.727 1026	8.729 4710	8.731 8267	47
14	8.719 9594	8.722 3668	8.724 7610	8.727 1421	8.729 5104	8.731 8658	46
15	8.719 9996	8.722 4068	8.724 8008	8.727 1817	8.729 5497	8.731 9050	45
16	8.720 0399	8.722 4468	8.724 8406	8.727 2213	8.729 5891	8.731 9441	44
17	8.720 0801	8.722 4868	8.724 8804	8.727 2609	8.729 6284	8.731 9833	43
18	8.720 1203	8.722 5268	8.724 9201	8.727 3004	8.729 6678	8.732 0224	42
19	8.720 1605	8.722 5668	8.724 9599	8.727 3400	8.729 7071	8.732 0616	41
20	8.720 2007	8.722 6068	8.724 9997	8.727 3795	8.729 7465	8.732 1007	40
21	8.720 2409	8.722 6468	8.725 0395	8.727 4191	8.729 7858	8.732 1398	39
22	8.720 2812	8.722 6868	8.725 0792	8.727 4586	8.729 8252	8.732 1789	38
23	8.720 3214	8.722 7268	8.725 1190	8.727 4982	8.729 8645	8.732 2181	37
24	8.720 3616	8.722 7667	8.725 1588	8.727 5377	8.729 9038	8.732 2572	36
25	8.720 4017	8.722 8067	8.725 1985	8.727 5773	8.729 9432	8.732 2963	35
26	8.720 4419	8.722 8467	8.725 2383	8.727 6168	8.729 9825	8.732 3354	34
27	8.720 4821	8.722 8867	8.725 2780	8.727 6563	8.730 0218	8.732 3745	33
28	8.720 5223	8.722 9266	8.725 3178	8.727 6959	8.730 0611	8.732 4136	32
29	8.720 5625	8.722 9666	8.725 3575	8.727 7354	8.730 1004	8.732 4527	31
30	8.720 6027	8.723 0065	8.725 3972	8.727 7749	8.730 1397	8.732 4918	30
31	8.720 6428	8.723 0465	8.725 4370	8.727 8144	8.730 1790	8.732 5309	29
32	8.720 6830	8.723 0864	8.725 4767	8.727 8540	8.730 2183	8.732 5700	28
33	8.720 7232	8.723 1264	8.725 5164	8.727 8935	8.730 2576	8.732 6091	27
34	8.720 7633	8.723 1663	8.725 5562	8.727 9330	8.730 2969	8.732 6482	26
35	8.720 8035	8.723 2063	8.725 5959	8.727 9725	8.730 3362	8.732 6873	25
36	8.720 8437	8.723 2462	8.725 6356	8.728 0120	8.730 3755	8.732 7263	24
37	8.720 8838	8.723 2861	8.725 6753	8.728 0515	8.730 4148	8.732 7654	23
38	8.720 9239	8.723 3261	8.725 7150	8.728 0910	8.730 4541	8.732 8045	22
39	8.720 9641	8.723 3660	8.725 7547	8.728 1305	8.730 4934	8.732 8435	21
40	8.721 0042	8.723 4059	8.725 7944	8.728 1700	8.730 5326	8.732 8826	20
41	8.721 0444	8.723 4458	8.725 8341	8.728 2094	8.730 5719	8.732 9217	19
42	8.721 0845	8.723 4857	8.725 8738	8.728 2489	8.730 6112	8.732 9607	18
43	8.721 1246	8.723 5256	8.725 9135	8.728 2884	8.730 6504	8.732 9998	17
44	8.721 1648	8.723 5655	8.725 9532	8.728 3279	8.730 6897	8.733 0388	16
45	8.721 2049	8.723 6054	8.725 9929	8.728 3673	8.730 7290	8.733 0779	15
46	8.721 2450	8.723 6453	8.726 0326	8.728 4068	8.730 7682	8.733 1169	14
47	8.721 2851	8.723 6852	8.726 0722	8.728 4463	8.730 8075	8.733 1560	13
48	8.721 3252	8.723 7251	8.726 1119	8.728 4857	8.730 8467	8.733 1950	12
49	8.721 3653	8.723 7650	8.726 1516	8.728 5252	8.730 8859	8.733 2340	11
50	8.721 4054	8.723 8049	8.726 1912	8.728 5646	8.730 9252	8.733 2730	10
51	8.721 4455	8.723 8448	8.726 2309	8.728 6041	8.730 9644	8.733 3121	9
52	8.721 4856	8.723 8846	8.726 2706	8.728 6435	8.731 0036	8.733 3511	8
53	8.721 5257	8.723 9245	8.726 3102	8.728 6830	8.731 0429	8.733 3901	7
54	8.721 5658	8.723 9644	8.726 3499	8.728 7224	8.731 0821	8.733 4291	6
55	8.721 6059	8.724 0043	8.726 3895	8.728 7618	8.731 1213	8.733 4681	5
56	8.721 6460	8.724 0441	8.726 4292	8.728 8013	8.731 1605	8.733 5071	4
57	8.721 6860	8.724 0840	8.726 4688	8.728 8407	8.731 1997	8.733 5461	3
58	8.721 7261	8.724 1238	8.726 5084	8.728 8801	8.731 2390	8.733 5851	2
59	8.721 7662	8.724 1637	8.726 5481	8.728 9195	8.731 2782	8.733 6241	1
60	8.721 8063	8.724 2035	8.726 5877	8.728 9589	8.731 3174	8.733 6631	0
″	59′	58′	57′	56′	55′	54′	″

cotg 86°

sin 3°

″	6′	7′	8′	9′	10′	11′	″
0	8.733 0272	8.735 3535	8.737 6675	8.739 9691	8.742 2586	8.744 5360	60
1	8.733 0660	8.735 3922	8.737 7059	8.740 0074	8.742 2966	8.744 5739	59
2	8.733 1049	8.735 4309	8.737 7444	8.740 0456	8.742 3347	8.744 6117	58
3	8.733 1438	8.735 4695	8.737 7828	8.740 0839	8.742 3728	8.744 6496	57
4	8.733 1826	8.735 5082	8.737 8213	8.740 1221	8.742 4108	8.744 6874	56
5	8.733 2215	8.735 5468	8.737 8597	8.740 1604	8.742 4488	8.744 7253	55
6	8.733 2604	8.735 5855	8.737 8982	8.740 1986	8.742 4869	8.744 7631	54
7	8.733 2992	8.735 6241	8.737 9366	8.740 2368	8.742 5249	8.744 8009	53
8	8.733 3381	8.735 6628	8.737 9751	8.740 2751	8.742 5629	8.744 8388	52
9	8.733 3769	8.735 7014	8.738 0135	8.740 3133	8.742 6010	8.744 8766	51
10	8.733 4157	8.735 7400	8.738 0519	8.740 3515	8.742 6390	8.744 9144	50
11	8.733 4546	8.735 7787	8.738 0904	8.740 3898	8.742 6770	8.744 9523	49
12	8.733 4934	8.735 8173	8.738 1288	8.740 4280	8.742 7150	8.744 9901	48
13	8.733 5323	8.735 8559	8.738 1672	8.740 4662	8.742 7531	8.745 0279	47
14	8.733 5711	8.735 8946	8.738 2056	8.740 5044	8.742 7911	8.745 0657	46
15	8.733 6099	8.735 9332	8.738 2440	8.740 5426	8.742 8291	8.745 1035	45
16	8.733 6487	8.735 9718	8.738 2824	8.740 5808	8.742 8671	8.745 1413	44
17	8.733 6876	8.736 0104	8.738 3208	8.740 6190	8.742 9051	8.745 1791	43
18	8.733 7264	8.736 0490	8.738 3593	8.740 6572	8.742 9431	8.745 2169	42
19	8.733 7652	8.736 0876	8.738 3977	8.740 6954	8.742 9811	8.745 2547	41
20	8.733 8040	8.736 1262	8.738 4360	8.740 7336	8.743 0191	8.745 2925	40
21	8.733 8428	8.736 1648	8.738 4744	8.740 7718	8.743 0571	8.745 3303	39
22	8.733 8816	8.736 2034	8.738 5128	8.740 8100	8.743 0950	8.745 3681	38
23	8.733 9204	8.736 2420	8.738 5512	8.740 8482	8.743 1330	8.745 4059	37
24	8.733 9592	8.736 2806	8.738 5896	8.740 8864	8.743 1710	8.745 4437	36
25	8.733 9980	8.736 3192	8.738 6280	8.740 9245	8.743 2090	8.745 4814	35
26	8.734 0368	8.736 3578	8.738 6664	8.740 9627	8.743 2470	8.745 5192	34
27	8.734 0756	8.736 3963	8.738 7047	8.741 0009	8.743 2849	8.745 5570	33
28	8.734 1143	8.736 4349	8.738 7431	8.741 0390	8.743 3229	8.745 5947	32
29	8.734 1531	8.736 4735	8.738 7815	8.741 0772	8.743 3608	8.745 6325	31
30	8.734 1919	8.736 5120	8.738 8198	8.741 1154	8.743 3988	8.745 6703	30
31	8.734 2307	8.736 5506	8.738 8582	8.741 1535	8.743 4368	8.745 7080	29
32	8.734 2694	8.736 5892	8.738 8965	8.741 1917	8.743 4747	8.745 7458	28
33	8.734 3082	8.736 6277	8.738 9349	8.741 2298	8.743 5127	8.745 7835	27
34	8.734 3470	8.736 6663	8.738 9732	8.741 2680	8.743 5506	8.745 8213	26
35	8.734 3857	8.736 7048	8.739 0116	8.741 3061	8.743 5886	8.745 8590	25
36	8.734 4245	8.736 7434	8.739 0499	8.741 3443	8.743 6265	8.745 8968	24
37	8.734 4632	8.736 7819	8.739 0883	8.741 3824	8.743 6644	8.745 9345	23
38	8.734 5020	8.736 8205	8.739 1266	8.741 4205	8.743 7024	8.745 9722	22
39	8.734 5407	8.736 8590	8.739 1649	8.741 4587	8.743 7403	8.746 0100	21
40	8.734 5795	8.736 8975	8.739 2033	8.741 4968	8.743 7782	8.746 0477	20
41	8.734 6182	8.736 9361	8.739 2416	8.741 5349	8.743 8161	8.746 0854	19
42	8.734 6569	8.736 9746	8.739 2799	8.741 5730	8.743 8541	8.746 1231	18
43	8.734 6957	8.737 0131	8.739 3182	8.741 6111	8.743 8920	8.746 1608	17
44	8.734 7344	8.737 0516	8.739 3565	8.741 6492	8.743 9299	8.746 1986	16
45	8.734 7731	8.737 0901	8.739 3949	8.741 6874	8.743 9678	8.746 2363	15
46	8.734 8118	8.737 1287	8.739 4332	8.741 7255	8.744 0057	8.746 2740	14
47	8.734 8505	8.737 1672	8.739 4715	8.741 7636	8.744 0436	8.746 3117	13
48	8.734 8893	8.737 2057	8.739 5098	8.741 8017	8.744 0815	8.746 3494	12
49	8.734 9280	8.737 2442	8.739 5481	8.741 8398	8.744 1194	8.746 3871	11
50	8.734 9667	8.737 2827	8.739 5864	8.741 8779	8.744 1573	8.746 4248	10
51	8.735 0054	8.737 3212	8.739 6247	8.741 9159	8.744 1952	8.746 4625	9
52	8.735 0441	8.737 3597	8.739 6629	8.741 9540	8.744 2331	8.746 5002	8
53	8.735 0828	8.737 3981	8.739 7012	8.741 9921	8.744 2709	8.746 5378	7
54	8.735 1215	8.737 4366	8.739 7395	8.742 0302	8.744 3088	8.746 5755	6
55	8.735 1601	8.737 4751	8.739 7778	8.742 0683	8.744 3467	8.746 6132	5
56	8.735 1988	8.737 5136	8.739 8161	8.742 1063	8.744 3846	8.746 6509	4
57	8.735 2375	8.737 5521	8.739 8543	8.742 1444	8.744 4224	8.746 6885	3
58	8.735 2762	8.737 5905	8.739 8926	8.742 1825	8.744 4603	8.746 7262	2
59	8.735 3149	8.737 6290	8.739 9309	8.742 2205	8.744 4982	8.746 7639	1
60	8.735 3535	8.737 6675	8.739 9691	8.742 2586	8.744 5360	8.746 8015	0
″	53′	52′	51′	50′	49′	48′	″

cos 86°

tang 3°

"	6′	7′	8′	9′	10′	11′	"
0	8.733 6631	8.735 9964	8.738 3172	8.740 6258	8.742 9222	8.745 2067	60
1	8.733 7021	8.736 0352	8.738 3558	8.740 6642	8.742 9604	8.745 2447	59
2	8.733 7411	8.736 0739	8.738 3944	8.740 7025	8.742 9986	8.745 2826	58
3	8.733 7801	8.736 1127	8.738 4329	8.740 7409	8.743 0367	8.745 3206	57
4	8.733 8191	8.736 1515	8.738 4715	8.740 7793	8.743 0749	8.745 3585	56
5	8.733 8580	8.736 1902	8.738 5101	8.740 8176	8.743 1131	8.745 3965	55
6	8.733 8970	8.736 2290	8.738 5486	8.740 8560	8.743 1512	8.745 4345	54
7	8.733 9360	8.736 2678	8.738 5872	8.740 8943	8.743 1894	8.745 4724	53
8	8.733 9750	8.736 3065	8.738 6257	8.740 9327	8.743 2275	8.745 5104	52
9	8.734 0139	8.736 3453	8.738 6643	8.740 9710	8.743 2657	8.745 5483	51
10	8.734 0529	8.736 3840	8.738 7028	8.741 0094	8.743 3038	8.745 5863	50
11	8.734 0918	8.736 4228	8.738 7414	8.741 0477	8.743 3419	8.745 6242	49
12	8.734 1308	8.736 4615	8.738 7799	8.741 0860	8.743 3801	8.745 6621	48
13	8.734 1697	8.736 5003	8.738 8184	8.741 1244	8.743 4182	8.745 7001	47
14	8.734 2087	8.736 5390	8.738 8570	8.741 1627	8.743 4563	8.745 7380	46
15	8.734 2476	8.736 5777	8.738 8955	8.741 2010	8.743 4945	8.745 7759	45
16	8.734 2865	8.736 6165	8.738 9340	8.741 2394	8.743 5326	8.745 8138	44
17	8.734 3255	8.736 6552	8.738 9725	8.741 2777	8.743 5707	8.745 8518	43
18	8.734 3644	8.736 6939	8.739 0111	8.741 3160	8.743 6088	8.745 8897	42
19	8.734 4033	8.736 7326	8.739 0496	8.741 3543	8.743 6469	8.745 9276	41
20	8.734 4423	8.736 7714	8.739 0881	8.741 3926	8.743 6850	8.745 9655	40
21	8.734 4812	8.736 8101	8.739 1266	8.741 4309	8.743 7232	8.746 0034	39
22	8.734 5201	8.736 8488	8.739 1651	8.741 4692	8.743 7613	8.746 0413	38
23	8.734 5590	8.736 8875	8.739 2036	8.741 5075	8.743 7994	8.746 0792	37
24	8.734 5979	8.736 9262	8.739 2421	8.741 5458	8.743 8374	8.746 1171	36
25	8.734 6368	8.736 9649	8.739 2806	8.741 5841	8.743 8755	8.746 1550	35
26	8.734 6757	8.737 0036	8.739 3191	8.741 6224	8.743 9136	8.746 1929	34
27	8.734 7146	8.737 0423	8.739 3576	8.741 6607	8.743 9517	8.746 2308	33
28	8.734 7535	8.737 0810	8.739 3961	8.741 6990	8.743 9898	8.746 2687	32
29	8.734 7924	8.737 1196	8.739 4345	8.741 7372	8.744 0279	8.746 3066	31
30	8.734 8313	8.737 1583	8.739 4730	8.741 7755	8.744 0660	8.746 3444	30
31	8.734 8702	8.737 1970	8.739 5115	8.741 8138	8.744 1040	8.746 3823	29
32	8.734 9091	8.737 2357	8.739 5500	8.741 8521	8.744 1421	8.746 4202	28
33	8.734 9480	8.737 2744	8.739 5884	8.741 8903	8.744 1802	8.746 4580	27
34	8.734 9868	8.737 3130	8.739 6269	8.741 9286	8.744 2182	8.746 4959	26
35	8.735 0257	8.737 3517	8.739 6654	8.741 9669	8.744 2563	8.746 5338	25
36	8.735 0646	8.737 3904	8.739 7038	8.742 0051	8.744 2943	8.746 5716	24
37	8.735 1034	8.737 4290	8.739 7423	8.742 0434	8.744 3324	8.746 6095	23
38	8.735 1423	8.737 4677	8.739 7807	8.742 0816	8.744 3704	8.746 6473	22
39	8.735 1812	8.737 5063	8.739 8192	8.742 1199	8.744 4085	8.746 6852	21
40	8.735 2200	8.737 5450	8.739 8576	8.742 1581	8.744 4465	8.746 7230	20
41	8.735 2589	8.737 5836	8.739 8961	8.742 1963	8.744 4846	8.746 7609	19
42	8.735 2977	8.737 6223	8.739 9345	8.742 2346	8.744 5226	8.746 7987	18
43	8.735 3365	8.737 6609	8.739 9729	8.742 2728	8.744 5606	8.746 8365	17
44	8.735 3754	8.737 6995	8.740 0114	8.742 3110	8.744 5987	8.746 8744	16
45	8.735 4142	8.737 7382	8.740 0498	8.742 3493	8.744 6367	8.746 9122	15
46	8.735 4531	8.737 7768	8.740 0882	8.742 3875	8.744 6747	8.746 9500	14
47	8.735 4919	8.737 8154	8.740 1260	8.742 4257	8.744 7127	8.746 9879	13
48	8.735 5307	8.737 8540	8.740 1651	8.742 4639	8.744 7507	8.747 0257	12
49	8.735 5695	8.737 8926	8.740 2035	8.742 5021	8.744 7888	8.747 0635	11
50	8.735 6084	8.737 9313	8.740 2419	8.742 5403	8.744 8268	8.747 1013	10
51	8.735 6472	8.737 9699	8.740 2803	8.742 5785	8.744 8648	8.747 1391	9
52	8.735 6860	8.738 0085	8.740 3187	8.742 6167	8.744 9028	8.747 1769	8
53	8.735 7248	8.738 0471	8.740 3571	8.742 6549	8.744 9408	8.747 2147	7
54	8.735 7636	8.738 0857	8.740 3955	8.742 6931	8.744 9788	8.747 2525	6
55	8.735 8024	8.738 1243	8.740 4339	8.742 7313	8.745 0168	8.747 2903	5
56	8.735 8412	8.738 1629	8.740 4723	8.742 7695	8.745 0548	8.747 3281	4
57	8.735 8800	8.738 2015	8.740 5107	8.742 8077	8.745 0927	8.747 3659	3
58	8.735 9188	8.738 2400	8.740 5490	8.742 8459	8.745 1307	8.747 4037	2
59	8.735 9576	8.738 2786	8.740 5874	8.742 8841	8.745 1687	8.747 4415	1
60	8.735 9964	8.738 3172	8.740 6258	8.742 9222	8.745 2067	8.747 4792	0
"	53′	52′	51′	50′	49′	48′	"

cotg 86°

sin 3°

″	12′	13′	14′	15′	16′	17′	″
0	8.746 8015	8.749 0553	8.751 2973	8.753 5278	8.755 7469	8.757 9546	60
1	8.746 8392	8.749 0927	8.751 3346	8.753 5649	8.755 7838	8.757 9913	59
2	8.746 8769	8.749 1302	8.751 3718	8.753 6020	8.755 8206	8.758 0280	58
3	8.746 9145	8.749 1676	8.751 4091	8.753 6390	8.755 8575	8.758 0647	57
4	8.746 9522	8.749 2051	8.751 4464	8.753 6761	8.755 8944	8.758 1014	56
5	8.746 9898	8.749 2425	8.751 4836	8.753 7132	8.755 9313	8.758 1381	55
6	8.747 0274	8.749 2800	8.751 5209	8.753 7502	8.755 9682	8.758 1748	54
7	8.747 0651	8.749 3174	8.751 5581	8.753 7873	8.756 0050	8.758 2115	53
8	8.747 1027	8.749 3549	8.751 5954	8.753 8243	8.756 0419	8.758 2481	52
9	8.747 1403	8.749 3923	8.751 6326	8.753 8614	8.756 0788	8.758 2848	51
10	8.747 1780	8.749 4297	8.751 6699	8.753 8984	8.756 1156	8.758 3215	50
11	8.747 2156	8.749 4672	8.751 7071	8.753 9355	8.756 1525	8.758 3582	49
12	8.747 2532	8.749 5046	8.751 7443	8.753 9725	8.756 1893	8.758 3948	48
13	8.747 2908	8.749 5420	8.751 7816	8.754 0096	8.756 2262	8.758 4315	47
14	8.747 3285	8.749 5794	8.751 8188	8.754 0466	8.756 2630	8.758 4681	46
15	8.747 3661	8.749 6169	8.751 8560	8.754 0836	8.756 2999	8.758 5048	45
16	8.747 4037	8.749 6543	8.751 8932	8.754 1207	8.756 3367	8.758 5415	44
17	8.747 4413	8.749 6917	8.751 9305	8.754 1577	8.756 3735	8.758 5781	43
18	8.747 4789	8.749 7291	8.751 9677	8.754 1947	8.756 4104	8.758 6148	42
19	8.747 5165	8.749 7665	8.752 0049	8.754 2317	8.756 4472	8.758 6514	41
20	8.747 5541	8.749 8039	8.752 0421	8.754 2688	8.756 4840	8.758 6880	40
21	8.747 5917	8.749 8413	8.752 0793	8.754 3058	8.756 5209	8.758 7247	39
22	8.747 6293	8.749 8787	8.752 1165	8.754 3428	8.756 5577	8.758 7613	38
23	8.747 6669	8.749 9161	8.752 1537	8.754 3798	8.756 5945	8.758 7980	37
24	8.747 7044	8.749 9535	8.752 1909	8.754 4168	8.756 6313	8.758 8346	36
25	8.747 7420	8.749 9909	8.752 2281	8.754 4538	8.756 6681	8.758 8712	35
26	8.747 7796	8.750 0282	8.752 2653	8.754 4908	8.756 7049	8.758 9078	34
27	8.747 8172	8.750 0656	8.752 3025	8.754 5278	8.756 7418	8.758 9444	33
28	8.747 8547	8.750 1030	8.752 3396	8.754 5648	8.756 7786	8.758 9811	32
29	8.747 8923	8.750 1404	8.752 3768	8.754 6018	8.756 8154	8.759 0177	31
30	8.747 9299	8.750 1777	8.752 4140	8.754 6388	8.756 8522	8.759 0543	30
31	8.747 9674	8.750 2151	8.752 4512	8.754 6757	8.756 8890	8.759 0909	29
32	8.748 0050	8.750 2525	8.752 4883	8.754 7127	8.756 9257	8.759 1275	28
33	8.748 0425	8.750 2898	8.752 5255	8.754 7497	8.756 9625	8.759 1641	27
34	8.748 0801	8.750 3272	8.752 5627	8.754 7867	8.756 9993	8.759 2007	26
35	8.748 1176	8.750 3645	8.752 5998	8.754 8236	8.757 0361	8.759 2373	25
36	8.748 1552	8.750 4019	8.752 6370	8.754 8606	8.757 0729	8.759 2739	24
37	8.748 1927	8.750 4392	8.752 6741	8.754 8976	8.757 1097	8.759 3105	23
38	8.748 2303	8.750 4766	8.752 7113	8.754 9345	8.757 1464	8.759 3471	22
39	8.748 2678	8.750 5139	8.752 7484	8.754 9715	8.757 1832	8.759 3836	21
40	8.748 3053	8.750 5513	8.752 7856	8.755 0085	8.757 2200	8.759 4202	20
41	8.748 3429	8.750 5886	8.752 8227	8.755 0454	8.757 2567	8.759 4568	19
42	8.748 3804	8.750 6259	8.752 8599	8.755 0824	8.757 2935	8.759 4934	18
43	8.748 4179	8.750 6632	8.752 8970	8.755 1193	8.757 3302	8.759 5299	17
44	8.748 4554	8.750 7006	8.752 9341	8.755 1562	8.757 3670	8.759 5665	16
45	8.748 4929	8.750 7379	8.752 9713	8.755 1932	8.757 4037	8.759 6031	15
46	8.748 5304	8.750 7752	8.753 0084	8.755 2301	8.757 4405	8.759 6396	14
47	8.748 5680	8.750 8125	8.753 0455	8.755 2670	8.757 4772	8.759 6762	13
48	8.748 6055	8.750 8498	8.753 0826	8.755 3040	8.757 5140	8.759 7127	12
49	8.748 6430	8.750 8871	8.753 1197	8.755 3409	8.757 5507	8.759 7493	11
50	8.748 6805	8.750 9244	8.753 1569	8.755 3778	8.757 5874	8.759 7859	10
51	8.748 7180	8.750 9617	8.753 1940	8.755 4147	8.757 6242	8.759 8224	9
52	8.748 7554	8.750 9990	8.753 2311	8.755 4517	8.757 6609	8.759 8589	8
53	8.748 7929	8.751 0363	8.753 2682	8.755 4886	8.757 6976	8.759 8955	7
54	8.748 8304	8.751 0736	8.753 3053	8.755 5255	8.757 7344	8.759 9320	6
55	8.748 8679	8.751 1109	8.753 3424	8.755 5624	8.757 7711	8.759 9685	5
56	8.748 9054	8.751 1482	8.753 3795	8.755 5993	8.757 8078	8.760 0051	4
57	8.748 9429	8.751 1855	8.753 4166	8.755 6362	8.757 8445	8.760 0416	3
58	8.748 9803	8.751 2228	8.753 4536	8.755 6731	8.757 8812	8.760 0781	2
59	8.749 0178	8.751 2600	8.753 4907	8.755 7100	8.757 9179	8.760 1147	1
60	8.749 0553	8.751 2973	8.753 5278	8.755 7469	8.757 9546	8.760 1512	0
″	47′	46′	45′	44′	43′	42′	″

cos 86°

tang 3°

″	12′	13′	14′	15′	16′	17′	″
0	8.747 4792	8.749 7400	8.751 9892	8.754 2269	8.756 4531	8.758 6681	60
1	8.747 5170	8.749 7776	8.752 0266	8.754 2641	8.756 4901	8.758 7049	59
2	8.747 5548	8.749 8152	8.752 0640	8.754 3013	8.756 5271	8.758 7417	58
3	8.747 5926	8.749 8528	8.752 1014	8.754 3384	8.756 5641	8.758 7786	57
4	8.747 6303	8.749 8903	8.752 1387	8.754 3756	8.756 6011	8.758 8154	56
5	8.747 6681	8.749 9279	8.752 1761	8.754 4128	8.756 6381	8.758 8522	55
6	8.747 7058	8.749 9655	8.752 2135	8.754 4500	8.756 6751	8.758 8890	54
7	8.747 7436	8.750 0030	8.752 2509	8.754 4872	8.756 7121	8.758 9258	53
8	8.747 7814	8.750 0406	8.752 2882	8.754 5244	8.756 7491	8.758 9626	52
9	8.747 8191	8.750 0782	8.752 3256	8.754 5615	8.756 7861	8.758 9994	51
10	8.747 8569	8.750 1157	8.752 3629	8.754 5987	8.756 8231	8.759 0362	50
11	8.747 8946	8.750 1533	8.752 4003	8.754 6359	8.756 8600	8.759 0730	49
12	8.747 9323	8.750 1908	8.752 4377	8.754 6730	8.756 8970	8.759 1097	48
13	8.747 9701	8.750 2283	8.752 4750	8.754 7102	8.756 9340	8.759 1465	47
14	8.748 0078	8.750 2659	8.752 5124	8.754 7473	8.756 9710	8.759 1833	46
15	8.748 0455	8.750 3034	8.752 5497	8.754 7845	8.757 0079	8.759 2201	45
16	8.748 0833	8.750 3410	8.752 5870	8.754 8216	8.757 0449	8.759 2569	44
17	8.748 1210	8.750 3785	8.752 6244	8.754 8588	8.757 0818	8.759 2936	43
18	8.748 1587	8.750 4160	8.752 6617	8.754 8959	8.757 1188	8.759 3304	42
19	8.748 1964	8.750 4535	8.752 6990	8.754 9331	8.757 1557	8.759 3672	41
20	8.748 2341	8.750 4911	8.752 7364	8.754 9702	8.757 1927	8.759 4039	40
21	8.748 2718	8.750 5286	8.752 7737	8.755 0073	8.757 2296	8.759 4407	39
22	8.748 3096	8.750 5661	8.752 8110	8.755 0445	8.757 2666	8.759 4774	38
23	8.748 3473	8.750 6036	8.752 8483	8.755 0816	8.757 3035	8.759 5142	37
24	8.748 3850	8.750 6411	8.752 8856	8.755 1187	8.757 3405	8.759 5510	36
25	8.748 4227	8.750 6786	8.752 9230	8.755 1558	8.757 3774	8.759 5877	35
26	8.748 4604	8.750 7161	8.752 9603	8.755 1930	8.757 4143	8.759 6244	34
27	8.748 4980	8.750 7536	8.752 9976	8.755 2301	8.757 4512	8.759 6612	33
28	8.748 5357	8.750 7911	8.753 0349	8.755 2672	8.757 4882	8.759 6979	32
29	8.748 5734	8.750 8286	8.753 0722	8.755 3043	8.757 5251	8.759 7347	31
30	8.748 6111	8.750 8661	8 753 1095	8.755 3414	8.757 5620	8.759 7714	30
31	8.748 6488	8.750 9036	8.753 1468	8.755 3785	8.757 5989	8.759 8081	29
32	8.748 6865	8.750 9410	8.753 1840	8.755 4156	8.757 6358	8.759 8448	28
33	8.748 7241	8.750 9785	8.753 2213	8.755 4527	8.757 6727	8.759 8816	27
34	8.748 7618	8.751 0160	8.753 2586	8.755 4898	8.757 7097	8.759 9183	26
35	8.748 7995	8.751 0535	8.753 2959	8.755 5269	8.757 7466	8.759 9550	25
36	8.748 8371	8.751 0909	8.753 3332	8.755 5640	8.757 7835	8.759 9917	24
37	8.748 8748	8.751 1284	8.753 3704	8.755 6011	8.757 8203	8.760 0284	23
38	8.748 9124	8.751 1659	8.753 4077	8.755 6381	8.757 8572	8.760 0651	22
39	8.748 9501	8.751 2033	8.753 4450	8.755 6752	8.757 8941	8.760 1018	21
40	8.748 9877	8.751 2408	8.753 4823	8.755 7123	8.757 9310	8.760 1385	20
41	8.749 0254	8.751 2782	8.753 5195	8.755 7494	8.757 9679	8.760 1752	19
42	8.749 0630	8.751 3157	8.753 5568	8.755 7864	8.758 0048	8.760 2119	18
43	8.749 1007	8.751 3531	8.753 5940	8.755 8235	8.758 0417	8.700 2486	17
44	8.749 1383	8.751 3906	8.753 6313	8.755 8606	8.758 0785	8.760 2853	16
45	8.749 1759	8.751 4280	8.753 6685	8.755 8976	8.758 1154	8.760 3220	15
46	8.749 2136	8.751 4654	8.753 7058	8.755 9347	8.758 1523	8.760 3587	14
47	8.749 2512	8.751 5029	8.753 7430	8.755 9717	8.758 1891	8.760 3954	13
48	8.749 2888	8.751 5403	8.753 7802	8.756 0088	8.758 2260	8.760 4320	12
49	8.749 3264	8.751 5777	8.753 8175	8.756 0458	8.758 2629	8.760 4687	11
50	8.749 3641	8.751 6152	8.753 8547	8.756 0829	8.758 2997	8.760 5054	10
51	8.749 4017	8.751 6526	8.753 8919	8.756 1199	8.758 3366	8.760 5420	9
52	8.749 4393	8.751 6900	8.753 9292	8.756 1569	8.758 3734	8.760 5787	8
53	8.749 4769	8.751 7274	8.753 9664	8.756 1940	8.758 4103	8.760 6154	7
54	8.749 5145	8.751 7648	8.754 0036	8.756 2310	8.758 4471	8.760 6520	6
55	8.749 5521	8.751 8022	8.754 0408	8.756 2680	8.758 4839	8.760 6887	5
56	8.749 5897	8.751 8396	8.754 0780	8.756 3051	8.758 5208	8.760 7253	4
57	8.749 6273	8.751 8770	8.754 1153	8.756 3421	8.758 5576	8.760 7620	3
58	8.749 6649	8.751 9144	8.754 1525	8.756 3791	8.758 5944	8.760 7986	2
59	8.749 7025	8.751 9518	8.754 1897	8.756 4161	8.758 6313	8.760 8353	1
60	8.749 7400	8.751 9892	8.754 2269	8.756 4531	8.758 6681	8.760 8719	0
″	47′	46′	45′	44′	43′	42′	″

cotg 86°

sin 3°

″	18′	19′	20′	21′	22′	23′	″
0	8.760 1512	8.762 3366	8.764 5111	8.766 6747	8.768 8275	8.770 9697	60
1	8.760 1877	8.762 3730	8.764 5472	8.766 7107	8.768 8633	8.771 0053	59
2	8.760 2242	8.762 4093	8.764 5834	8.766 7466	8.768 8991	8.771 0410	58
3	8.760 2607	8.762 4456	8.764 6195	8.766 7826	8.768 9349	8.771 0766	57
4	8.760 2972	8.762 4819	8.764 6557	8.766 8186	8.768 9707	8.771 1122	56
5	8.760 3337	8.762 5182	8.764 6918	8.766 8545	8.769 0065	8.771 1478	55
6	8.760 3702	8.762 5546	8.764 7279	8.766 8905	8.769 0422	8.771 1834	54
7	8.760 4067	8.762 5909	8.764 7641	8.766 9264	8.769 0780	8.771 2190	53
8	8.760 4432	8.762 6272	8.764 8002	8.766 9624	8.769 1138	8.771 2546	52
9	8.760 4797	8.762 6635	8.764 8363	8.766 9983	8 769 1496	8.771 2901	51
10	8.760 5162	8.762 6998	8.764 8724	8.767 0343	8.769 1853	8.771 3257	50
11	8.760 5527	8.762 7361	8.764 9086	8.767 0702	8.769 2211	8.771 3613	49
12	8.760 5891	8.762 7724	8.764 9447	8.767 1061	8.769 2568	8.771 3969	48
13	8.760 6256	8.762 8087	8.764 9808	8.767 1421	8.769 2926	8.771 4325	47
14	8.760 6621	8.762 8450	8.765 0169	8.767 1780	8.769 3283	8.771 4681	46
15	8.760 6986	8.762 8813	8.765 0530	8.767 2139	8.769 3641	8.771 5036	45
16	8.760 7350	8.762 9176	8.765 0891	8.767 2498	8 769 3998	8.771 5392	44
17	8.760 7715	8.762 9538	8.765 1252	8.767 2858	8.769 4356	8.771 5748	43
18	8.760 8080	8.762 9901	8.765 1613	8.767 3217	8.769 4713	8.771 6103	42
19	8.760 8444	8.763 0264	8.765 1974	8.767 3576	8.769 5071	8.771 6459	41
20	8.760 8809	8.763 0627	8.765 2335	8.767 3935	8.769 5428	8.771 6814	40
21	8.760 9173	8.763 0989	8.765 2696	8.767 4294	8.769 5785	8.771 7170	39
22	8.760 9538	8.763 1352	8.765 3057	8.767 4653	8.769 6142	8.771 7526	38
23	8.760 9902	8.763 1715	8.765 3418	8.767 5012	8.769 6500	8.771 7881	37
24	8.761 0267	8.763 2077	8.765 3778	8.767 5371	8.769 6857	8.771 8236	36
25	8.761 0631	8.763 2440	8.765 4139	8.767 5730	8.769 7214	8.771 8592	35
26	8.761 0996	8.763 2802	8.765 4500	8.767 6089	8.769 7571	8.771 8947	34
27	8.761 1360	8.763 3165	8.765 4861	8.767 6448	8.769 7928	8.771 9303	33
28	8.761 1724	8.763 3527	8.765 5221	8.767 6807	8.769 8286	8.771 9658	32
29	8.761 2088	8.763 3890	8.765 5582	8.767 7166	8.769 8643	8.772 0013	31
30	8.761 2453	8.763 4252	8.765 5943	8.767 7525	8.769 9000	8.772 0369	30
31	8.761 2817	8.763 4615	8.765 6303	8.767 7883	8.769 9357	8.772 0724	29
32	8.761 3181	8.763 4977	8.765 6664	8.767 8242	8.769 9714	8.772 1079	28
33	8.761 3545	8.763 5339	8.765 7024	8.767 8601	8.770 0071	8.772 1434	27
34	8.761 3909	8.763 5702	8.765 7385	8.767 8960	8.770 0428	8.772 1789	26
35	8.761 4274	8.763 6064	8.765 7745	8.767 9318	8.770 0784	8.772 2145	25
36	8.761 4638	8.763 6426	8.765 8106	8.767 9677	8.770 1141	8.772 2500	24
37	8.761 5002	8.763 6788	8.765 8466	8.768 0036	8.770 1498	8.772 2855	23
38	8.761 5366	8.763 7151	8.765 8826	8.768 0394	8.770 1855	8.772 3210	22
39	8.761 5730	8.763 7513	8.765 9187	8.768 0753	8.770 2212	8.772 3565	21
40	8.761 6094	8.763 7875	8.765 9547	8.768 1111	8.770 2568	8.772 3920	20
41	8.761 6458	8.763 8237	8.765 9907	8.768 1470	8.770 2925	8.772 4275	19
42	8.761 6821	8.763 8599	8.766 0268	8.768 1828	8.770 3282	8.772 4630	18
43	8.761 7185	8.763 8961	8.766 0628	8.768 2187	8.770 3639	8.772 4985	17
44	8.761 7549	8.763 9323	8.766 0988	8.768 2545	8.770 3995	8.772 5340	16
45	8.761 7913	8.763 9685	8.766 1348	8.768 2903	8.770 4352	8.772 5694	15
46	8.761 8277	8.764 0047	8.766 1708	8.768 3262	8.770 4708	8.772 6049	14
47	8.761 8640	8.764 0409	8.766 2068	8.768 3620	8.770 5065	8.772 6404	13
48	8.761 9004	8.764 0771	8.766 2428	8.768 3978	8.770 5421	8.772 6759	12
49	8.761 9368	8.764 1133	8.766 2789	8.768 4337	8.770 5778	8.772 7114	11
50	8.761 9731	8.764 1494	8.766 3149	8.768 4695	8.770 6134	8.772 7468	10
51	8.762 0095	8.764 1856	8.766 3509	8.768 5053	8.770 6491	8.772 7823	9
52	8.762 0459	8.764 2218	8.766 3868	8.768 5411	8.770 6847	8.772 8178	8
53	8.762 0822	8.764 2580	8.766 4228	8.768 5769	8.770 7204	8.772 8532	7
54	8.762 1186	8.764 2941	8.766 4588	8.768 6127	8.770 7560	8.772 8887	6
55	8.762 1549	8.764 3303	8.766 4948	8.768 6486	8.770 7916	8.772 9241	5
56	8.762 1913	8.764 3665	8.766 5308	8.768 6844	8.770 8272	8.772 9596	4
57	8.762 2276	8.764 4026	8.766 5668	8.768 7202	8.770 8629	8.772 9950	3
58	8.762 2640	8.764 4388	8.766 6028	8.768 7560	8.770 8985	8.773 0305	2
59	8.762 3003	8.764 4749	8.766 6387	8.768 7918	8.770 9341	8.773 0659	1
60	8.762 3366	8.764 5111	8.766 6747	8.768 8275	8.770 9697	8.773 1014	0
″	41′	40′	39′	38′	37′	36′	″

cos 86°

tang 3°

″	18′	19′	20′	21′	22′	23′	″
0	8.760 8719	8.763 0647	8.765 2465	8.767 4175	8.769 5777	8.771 7274	60
1	8.760 9085	8.763 1011	8.765 2827	8.767 4536	8.769 6136	8.771 7631	59
2	8.760 9452	8.763 1376	8.765 3190	8.767 4896	8.769 6495	8.771 7988	58
3	8.760 9818	8.763 1740	8.765 3553	8.767 5257	8.769 6854	8.771 8346	57
4	8.761 0184	8.763 2105	8.765 3915	8.767 5618	8.769 7214	8.771 8703	56
5	8.761 0551	8.763 2469	8.765 4278	8.767 5979	8.769 7573	8.771 9060	55
6	8.761 0917	8.763 2833	8.765 4641	8.767 6340	8.769 7932	8.771 9417	54
7	8.761 1283	8.763 3198	8.765 5003	8.767 6700	8.769 8291	8.771 9775	53
8	8.761 1649	8.763 3562	8.765 5366	8.767 7061	8.769 8649	8.772 0132	52
9	8.761 2015	8.763 3926	8.765 5728	8.767 7422	8.769 9008	8.772 0489	51
10	8.761 2381	8.763 4291	8.765 6091	8.767 7782	8.769 9367	8.772 0846	50
11	8.761 2747	8.763 4655	8.765 6453	8.767 8143	8.769 9726	8.772 1203	49
12	8.761 3113	8.763 5019	8.765 6815	8.767 8504	8.770 0085	8.772 1560	48
13	8.761 3479	8 763 5383	8.765 7178	8.767 8864	8.770 0444	8.772 1917	47
14	8.761 3845	8.763 5747	8.765 7540	8.767 9225	8.770 0802	8.772 2274	46
15	8.761 4211	8.763 6111	8.765 7902	8.767 9585	8.770 1161	8.772 2631	45
16	8.761 4577	8.763 6475	8.765 8265	8.767 9946	8.770 1520	8.772 2988	44
17	8.761 4943	8.763 6839	8.765 8627	8.768 0306	8.770 1879	8.772 3345	43
18	8.761 5309	8.763 7204	8.765 8989	8.768 0667	8.770 2237	8.772 3702	42
19	8.761 5675	8.763 7567	8.765 9351	8.768 1027	8.770 2596	8.772 4059	41
20	8.761 6040	8.763 7931	8.765 9713	8.768 1387	8.770 2954	8.772 4416	40
21	8.761 6406	8.763 8295	8.766 0075	8.768 1748	8.770 3313	8.772 4772	39
22	8.761 6772	8.763 8659	8.766 0438	8.768 2108	8.770 3671	8.772 5129	38
23	8.761 7138	8.763 9023	8.766 0800	8.768 2468	8.770 4030	8.772 5486	37
24	8.761 7503	8.763 9387	8.766 1162	8.768 2828	8.770 4388	8.772 5843	36
25	8.761 7869	8.763 9751	8.766 1524	8.768 3189	8.770 4747	8.772 6199	35
26	8.761 8235	8.764 0115	8.766 1886	8.768 3549	8.770 5105	8.772 6556	34
27	8.761 8600	8.764 0478	8.766 2248	8.768 3909	8.770 5464	8.772 6913	33
28	8.761 8966	8.764 0842	8.766 2609	8.768 4269	8.770 5822	8.772 7269	32
29	8.761 9331	8.764 1206	8.766 2971	8.768 4629	8.770 6180	8.772 7626	31
30	8.761 9697	8.764 1569	8.766 3333	8.768 4989	8.770 6539	8.772 7982	30
31	8.762 0062	8.764 1933	8.766 3695	8.768 5349	8.770 6897	8.772 8339	29
32	8.762 0427	8.764 2297	8.766 4057	8.768 5709	8.770 7255	8.772 8695	28
33	8.762 0793	8.764 2660	8.766 4419	8.768 6069	8.770 7613	8.772 9052	27
34	8.762 1158	8.764 3024	8.766 4780	8.768 6429	8.770 7971	8.772 9408	26
35	8.762 1523	8.764 3387	8.766 5142	8.768 6789	8.770 8330	8.772 9764	25
36	8.762 1889	8.764 3751	8.766 5504	8.768 7149	8.770 8688	8.773 0121	24
37	8.762 2254	8.764 4114	8.766 5865	8.768 7509	8.770 9046	8.773 0477	23
38	8.762 2619	8.764 4477	8.766 6227	8.768 7869	8.770 9404	8.773 0833	22
39	8.762 2984	8.764 4841	8.766 6588	8.768 8228	8.770 9762	8.773 1190	21
40	8.762 3350	8.764 5204	8.766 6950	8.768 8588	8.771 0120	8.773 1546	20
41	8.762 3715	8.764 5567	8.766 7311	8.768 8948	8.771 0478	8.773 1902	19
42	8.762 4080	8.764 5931	8.766 7673	8.768 9308	8.771 0836	8.773 2258	18
43	8.762 4445	8.764 6294	8.766 8034	8.768 9667	8.771 1194	8.773 2615	17
44	8.762 4810	8.764 6657	8.766 8396	8.769 0027	8.771 1551	8.773 2971	16
45	8.762 5175	8.764 7020	8.766 8757	8.769 0387	8.771 1909	8.773 3327	15
46	8.762 5540	8.764 7384	8.766 9119	8.769 0746	8.771 2267	8.773 3683	14
47	8.762 5905	8.764 7747	8.766 9480	8.769 1106	8.771 2625	8.773 4039	13
48	8.762 6270	8.764 8110	8.766 9841	8.769 1465	8.771 2983	8.773 4395	12
49	8.762 6635	8.764 8473	8.767 0203	8.769 1825	8.771 3340	8.773 4751	11
50	8.762 7000	8.764 8836	8.767 0564	8.769 2184	8.771 3698	8.773 5107	10
51	8.762 7364	8.764 9199	8.767 0925	8.769 2544	8.771 4056	8.773 5463	9
52	8.762 7729	8.764 9562	8.767 1286	8.769 2903	8.771 4413	8.773 5819	8
53	8.762 8094	8.764 9925	8.767 1647	8.769 3262	8.771 4771	8.773 6174	7
54	8.762 8459	8.765 0288	8.767 2008	8.769 3622	8.771 5129	8.773 6530	6
55	8.762 8824	8.765 0651	8.767 2370	8.769 3981	8.771 5486	8.773 6886	5
56	8.762 9188	8.765 1014	8.767 2731	8.769 4340	8.771 5844	8.773 7242	4
57	8.762 9553	8.765 1376	8.767 3092	8.769 4700	8.771 6201	8.773 7598	3
58	8.762 9917	8.765 1739	8.767 3453	8.769 5059	8.771 6559	8.773 7953	2
59	8.763 0282	8.765 2102	8.767 3814	8.769 5418	8.771 6916	8.773 8309	1
60	8.763 0647	8.765 2465	8.767 4175	8.769 5777	8.771 7274	8.773 8665	0
″	41′	40′	39′	38′	37′	36′	″

cotg 86°

″	24′	25′	26′	27′	28′	29′	″
0	8.773 1014	8.775 2226	8.777 3334	8.779 4340	8.781 5244	8.783 6048	60
1	8.773 1368	8.775 2578	8.777 3685	8.779 4689	8.781 5592	8.783 6394	59
2	8.773 1722	8.775 2931	8.777 4036	8.779 5038	8.781 5939	8.783 6740	58
3	8.773 2077	8.775 3283	8.777 4387	8.779 5388	8.781 6287	8.783 7086	57
4	8.773 2431	8.775 3636	8.777 4738	8.779 5737	8.781 6634	8.783 7432	56
5	8.773 2785	8.775 3989	8.777 5088	8.779 6086	8.781 6982	8.783 7778	55
6	8.773 3140	8.775 4341	8.777 5439	8.779 6435	8.781 7329	8.783 8123	54
7	8.773 3494	8.775 4694	8.777 5790	8.779 6784	8.781 7677	8.783 8469	53
8	8.773 3848	8.775 5046	8.777 6141	8.779 7133	8.781 8024	8.783 8815	52
9	8.773 4202	8.775 5398	8.777 6491	8.779 7482	8.781 8371	8.783 9160	51
10	8.773 4556	8.775 5751	8.777 6842	8.779 7831	8.781 8719	8.783 9506	50
11	8.773 4910	8.775 6103	8.777 7193	8.779 8180	8.781 9066	8.783 9852	49
12	8.773 5264	8.775 6455	8.777 7543	8.779 8529	8.781 9413	8.784 0197	48
13	8.773 5618	8.775 6808	8.777 7894	8.779 8878	8.781 9760	8.784 0543	47
14	8.773 5972	8.775 7160	8.777 8245	8.779 9227	8.782 0108	8.784 0888	46
15	8.773 6326	8.775 7512	8.777 8595	8.779 9576	8.782 0455	8.784 1234	45
16	8.773 6680	8.775 7865	8.777 8946	8.779 9924	8.782 0802	8.784 1579	44
17	8.773 7034	8.775 8217	8.777 9296	8.780 0273	8.782 1149	8.784 1925	43
18	8.773 7388	8.775 8569	8.777 9646	8.780 0622	8.782 1496	8.784 2270	42
19	8.773 7742	8.775 8921	8.777 9997	8.780 0971	8.782 1843	8.784 2615	41
20	8.773 8096	8.775 9273	8.778 0347	8.780 1319	8.782 2190	8.784 2961	40
21	8.773 8450	8.775 9625	8.778 0698	8.780 1668	8.782 2537	8.784 3306	39
22	8.773 8803	8.775 9977	8.778 1048	8.780 2017	8.782 2884	8.784 3651	38
23	8.773 9157	8.776 0329	8.778 1398	8.780 2365	8.782 3231	8.784 3997	37
24	8.773 9511	8.776 0681	8.778 1749	8.780 2714	8.782 3578	8.784 4342	36
25	8.773 9865	8.776 1033	8.778 2099	8.780 3062	8.782 3925	8.784 4687	35
26	8.774 0218	8.776 1385	8.778 2449	8.780 3411	8.782 4272	8.784 5032	34
27	8.774 0572	8.776 1737	8.778 2799	8.780 3759	8.782 4619	8.784 5378	33
28	8.774 0926	8.776 2089	8.778 3149	8.780 4108	8.782 4965	8.784 5723	32
29	8.774 1279	8.776 2441	8.778 3500	8.780 4456	8.782 5312	8.784 6068	31
30	8.774 1633	8.776 2793	8.778 3850	8.780 4805	8.782 5659	8.784 6413	30
31	8.774 1986	8.776 3144	8.778 4200	8.780 5153	8.782 6006	8.784 6758	29
32	8.774 2340	8.776 3496	8.778 4550	8.780 5502	8.782 6352	8.784 7103	28
33	8.774 2693	8.776 3848	8.778 4900	8.780 5850	8.782 6699	8.784 7448	27
34	8.774 3047	8.776 4200	8.778 5250	8.780 6198	8.782 7046	8.784 7793	26
35	8.774 3400	8.776 4551	8.778 5600	8.780 6546	8.782 7392	8.784 8138	25
36	8.774 3753	8.776 4903	8.778 5950	8.780 6895	8.782 7739	8.784 8483	24
37	8.774 4107	8.776 5255	8.778 6300	8.780 7243	8.782 8085	8.784 8828	23
38	8.774 4460	8.776 5606	8.778 6650	8.780 7591	8.782 8432	8.784 9173	22
39	8.774 4813	8.776 5958	8.778 6999	8.780 7939	8.782 8778	8.784 9518	21
40	8.774 5166	8.776 6309	8.778 7349	8.780 8287	8.782 9125	8.784 9862	20
41	8.774 5520	8.776 6661	8.778 7699	8.780 8636	8.782 9471	8.785 0207	19
42	8.774 5873	8.776 7012	8.778 8049	8.780 8984	8.782 9818	8.785 0552	18
43	8.774 6226	8.776 7364	8.778 8399	8.780 9332	8.783 0164	8.785 0897	17
44	8.774 6579	8.776 7715	8.778 8748	8.780 9680	8.783 0510	8.785 1241	16
45	8.774 6932	8.776 8067	8.778 9098	8.781 0028	8.783 0857	8.785 1586	15
46	8.774 7285	8.776 8418	8.778 9448	8.781 0376	8.783 1203	8.785 1931	14
47	8.774 7638	8.776 8769	8.778 9797	8.781 0724	8.783 1549	8.785 2275	13
48	8.774 7992	8.776 9121	8.779 0147	8.781 1072	8.783 1896	8.785 2620	12
49	8.774 8345	8.776 9472	8.779 0496	8.781 1419	8.783 2242	8.785 2964	11
50	8.774 8697	8.776 9823	8.779 0846	8.781 1767	8.783 2588	8.785 3309	10
51	8.774 9050	8.777 0174	8.779 1196	8.781 2115	8.783 2934	8.785 3653	9
52	8.774 9403	8.777 0525	8.779 1545	8.781 2463	8.783 3280	8.785 3998	8
53	8.774 9756	8.777 0877	8.779 1894	8.781 2811	8.783 3626	8.785 4342	7
54	8.775 0109	8.777 1228	8.779 2244	8.781 3158	8.783 3972	8.785 4687	6
55	8.775 0462	8.777 1579	8.779 2593	8.781 3506	8.783 4319	8.785 5031	5
56	8.775 0815	8.777 1930	8.779 2943	8.781 3854	8.783 4665	8.785 5376	4
57	8.775 1167	8.777 2281	8.779 3292	8.781 4202	8.783 5011	8.785 5720	3
58	8.775 1520	8.777 2632	8.779 3641	8.781 4549	8.783 5357	8.785 6064	2
59	8.775 1873	8.777 2983	8.779 3991	8.781 4897	8.783 5702	8.785 6409	1
60	8.775 2226	8.777 3334	8.779 4340	8.781 5244	8.783 6048	8.785 6753	0
″	35′	34′	33′	32′	31′	30′	″

″	24′	25′	26′	27′	28′	29′	″
0	8.773 8665	8.775 9952	8.778 1136	8.780 2218	8.782 3199	8.784 4079	60
1	8.773 9020	8.776 0306	8.778 1488	8.780 2568	8.782 3547	8.784 4426	59
2	8.773 9376	8.776 0660	8.778 1840	8.780 2919	8.782 3896	8.784 4774	58
3	8.773 9732	8.776 1014	8.778 2192	8.780 3269	8.782 4245	8.784 5121	57
4	8.774 0087	8.776 1367	8.778 2545	8.780 3620	8.782 4594	8.784 5468	56
5	8.774 0443	8.776 1721	8.778 2897	8.780 3970	8.782 4943	8.784 5815	55
6	8.774 0798	8.776 2075	8.778 3249	8.780 4320	8.782 5291	8.784 6162	54
7	8.774 1154	8.776 2429	8.778 3601	8.780 4671	8.782 5640	8.784 6509	53
8	8.774 1509	8.776 2782	8.778 3953	8.780 5021	8.782 5988	8.784 6856	52
9	8.774 1864	8.776 3136	8.778 4305	8.780 5371	8.782 6337	8.784 7203	51
10	8.774 2220	8.776 3490	8.778 4657	8.780 5722	8.782 6686	8.784 7550	50
11	8.774 2575	8.776 3843	8.778 5009	8.780 6072	8.782 7034	8.784 7897	49
12	8.774 2930	8.776 4197	8.778 5360	8.780 6422	8.782 7383	8.784 8244	48
13	8.774 3286	8.776 4550	8.778 5712	8.780 6772	8.782 7731	8.784 8590	47
14	8.774 3641	8.776 4904	8.778 6064	8.780 7122	8.782 8080	8.784 8937	46
15	8.774 3996	8.776 5258	8.778 6416	8.780 7472	8.782 8428	8.784 9284	45
16	8.774 4351	8.776 5611	8.778 6768	8.780 7823	8.782 8777	8.784 9631	44
17	8.774 4707	8.776 5964	8.778 7119	8.780 8173	8.782 9125	8.784 9977	43
18	8.774 5062	8.776 6318	8.778 7471	8.780 8523	8.782 9473	8.785 0324	42
19	8.774 5417	8.776 6671	8.778 7823	8.780 8873	8.782 9822	8.785 0671	41
20	8.774 5772	8.776 7025	8.778 8175	8.780 9223	8.783 0170	8.785 1017	40
21	8.774 6127	8.776 7378	8.778 8526	8.780 9573	8.783 0518	8.785 1364	39
22	8.774 6482	8.776 7731	8.778 8878	8.780 9922	8.783 0866	8.785 1711	38
23	8.774 6837	8.776 8085	8.778 9229	8.781 0272	8.783 1215	8.785 2057	37
24	8.774 7192	8.776 8438	8.778 9581	8.781 0622	8.783 1563	8.785 2404	36
25	8.774 7547	8.776 8791	8.778 9932	8.781 0972	8.783 1911	8.785 2750	35
26	8.774 7902	8.776 9144	8.779 0284	8.781 1322	8.783 2259	8.785 3097	34
27	8.774 8257	8.776 9497	8.779 0635	8.781 1672	8.783 2607	8.785 3443	33
28	8.774 8612	8.776 9851	8.779 0987	8.781 2021	8.783 2955	8.785 3790	32
29	8.774 8966	8.777 0204	8.779 1338	8.781 2371	8.783 3303	8.785 4136	31
30	8.774 9321	8.777 0557	8.779 1690	8.781 2721	8.783 3651	8.785 4482	30
31	8.774 9676	8.777 0910	8.779 2041	8.781 3070	8.783 3999	8.785 4829	29
32	8.775 0031	8.777 1263	8.779 2392	8.781 3420	8.783 4347	8.785 5175	28
33	8.775 0385	8.777 1616	8.779 2744	8.781 3770	8.783 4695	8.785 5521	27
34	8.775 0740	8.777 1969	8.779 3095	8.781 4119	8.783 5043	8.785 5868	26
35	8.775 1095	8.777 2322	8.779 3446	8.781 4469	8.783 5391	8.785 6214	25
36	8.775 1449	8.777 2675	8.779 3797	8.781 4818	8.783 5739	8.785 6560	24
37	8.775 1804	8.777 3027	8.779 4148	8.781 5168	8.783 6087	8.785 6906	23
38	8.775 2159	8.777 3380	8.779 4500	8.781 5517	8.783 6435	8.785 7252	22
39	8.775 2513	8.777 3733	8.779 4851	8.781 5867	8.783 6782	8.785 7599	21
40	8.775 2868	8.777 4086	8.779 5202	8.781 6216	8.783 7130	8.785 7945	20
41	8.775 3222	8.777 4439	8.779 5553	8.781 6566	8.783 7478	8.785 8291	19
42	8.775 3577	8.777 4791	8.779 5904	8.781 6915	8.783 7826	8.785 8637	18
43	8.775 3931	8.777 5144	8.779 6255	8.781 7264	8.783 8173	8.785 8983	17
44	8.775 4285	8.777 5497	8.779 6606	8.781 7614	8.783 8521	8.785 9329	16
45	8.775 4640	8.777 5850	8.779 6957	8.781 7963	8.783 8868	8.785 9675	15
46	8.775 4994	8.777 6202	8.779 7308	8.781 8312	8.783 9216	8.786 0021	14
47	8.775 5348	8.777 6555	8.779 7659	8.781 8661	8.783 9564	8.786 0367	13
48	8.775 5703	8.777 6907	8.779 8010	8.781 9011	8.783 9911	8.786 0712	12
49	8.775 6057	8.777 7260	8.779 8360	8.781 9360	8.784 0259	8.786 1058	11
50	8.775 6411	8.777 7612	8.779 8711	8.781 9709	8.784 0606	8.786 1404	10
51	8.775 6765	8.777 7965	8.779 9062	8.782 0058	8.784 0954	8.786 1750	9
52	8.775 7120	8.777 8317	8.779 9413	8.782 0407	8.784 1301	8.786 2096	8
53	8.775 7474	8.777 8670	8.779 9763	8.782 0756	8.784 1648	8.786 2441	7
54	8.775 7828	8.777 9022	8.780 0114	8.782 1105	8.784 1996	8.786 2787	6
55	8.775 8182	8.777 9374	8.780 0465	8.782 1454	8.784 2343	8.786 3133	5
56	8.775 8536	8.777 9727	8.780 0816	8.782 1803	8.784 2690	8.786 3478	4
57	8.775 8890	8.778 0079	8.780 1166	8.782 2152	8.784 3038	8.786 3824	3
58	8.775 9244	8.778 0431	8.780 1517	8.782 2501	8.784 3385	8.786 4170	2
59	8.775 9598	8.778 0784	8.780 1867	8.782 2850	8.784 3732	8.786 4515	1
60	8.775 9952	8.778 1136	8.780 2218	8.782 3199	8.784 4079	8.786 4861	0
″	35′	34′	33′	32′	31′	30′	″

cotg 86°

sin 3°

″	30′	31′	32′	33′	34′	35′	″
0	8.785 6753	8.787 7359	8.789 7867	8.791 8278	8.793 8594	8.795 8814	60
1	8.785 7097	8.787 7701	8.789 8208	8.791 8618	8.793 8931	8.795 9150	59
2	8.785 7441	8.787 8044	8.789 8549	8.791 8957	8.793 9269	8.795 9487	58
3	8.785 7785	8.787 8386	8.789 8890	8.791 9296	8.793 9607	8.795 9823	57
4	8.785 8130	8.787 8729	8.789 9231	8.791 9635	8.793 9945	8.796 0159	56
5	8.785 8474	8.787 9071	8.789 9571	8.791 9975	8.794 0282	8.796 0495	55
6	8.785 8818	8.787 9414	8.789 9912	8.792 0314	8.794 0620	8.796 0831	54
7	8.785 9162	8.787 9756	8.790 0253	8.792 0653	8.794 0958	8.796 1167	53
8	8.785 9506	8.788 0099	8.790 0594	8.792 0992	8.794 1295	8.796 1503	52
9	8.785 9850	8.788 0441	8.790 0935	8.792 1332	8.794 1633	8.796 1839	51
10	8.786 0194	8.788 0783	8.790 1275	8.792 1671	8.794 1970	8.796 2175	50
11	8.786 0538	8.788 1126	8.790 1616	8.792 2010	8.794 2308	8.796 2511	49
12	8.786 0882	8.788 1468	8.790 1957	8.792 2349	8.794 2645	8.796 2847	48
13	8.786 1226	8.788 1810	8.790 2297	8.792 2688	8.794 2983	8.796 3183	47
14	8.786 1570	8.788 2153	8.790 2638	8.792 3027	8.794 3320	8.796 3519	46
15	8.786 1913	8.788 2495	8.790 2979	8.792 3366	8.794 3658	8.796 3855	45
16	8.786 2257	8.788 2837	8.790 3319	8.792 3705	8.794 3995	8.796 4190	44
17	8.786 2601	8.788 3179	8.790 3660	8.792 4044	8.794 4332	8.796 4526	43
18	8.786 2945	8.788 3521	8.790 4000	8.792 4383	8.794 4670	8.796 4862	42
19	8.786 3289	8.788 3863	8.790 4341	8.792 4722	8.794 5007	8.796 5198	41
20	8.786 3632	8.788 4205	8.790 4681	8.792 5061	8.794 5344	8.796 5534	40
21	8.786 3976	8.788 4548	8.790 5022	8.792 5399	8.794 5682	8.796 5869	39
22	8.786 4320	8.788 4890	8.790 5362	8.792 5738	8.794 6019	8.796 6205	38
23	8.786 4663	8.788 5232	8.790 5702	8.792 6077	8.794 6356	8.796 6540	37
24	8.786 5007	8.788 5574	8.790 6043	8.792 6416	8.794 6693	8.796 6876	36
25	8.786 5350	8.788 5915	8.790 6383	8.792 6755	8.794 7030	8.796 7212	35
26	8.786 5694	8.788 6257	8.790 6724	8.792 7093	8.794 7368	8.796 7547	34
27	8.786 6038	8.788 6599	8.790 7064	8.792 7432	8.794 7705	8.796 7883	33
28	8.786 6381	8.788 6941	8.790 7404	8.792 7771	8.794 8042	8.796 8218	32
29	8.786 6725	8.788 7283	8.790 7744	8.792 8109	8.794 8379	8.796 8554	31
30	8.786 7068	8.788 7625	8.790 8084	8.792 8448	8.794 8716	8.796 8889	30
31	8.786 7411	8.788 7967	8.790 8425	8.792 8786	8.794 9053	8.796 9225	29
32	8.786 7755	8.788 8308	8.790 8765	8.792 9125	8.794 9390	8.796 9560	28
33	8.786 8098	8.788 8650	8.790 9105	8.792 9463	8.794 9727	8.796 9895	27
34	8.786 8441	8.788 8992	8.790 9445	8.792 9802	8.795 0064	8.797 0231	26
35	8.786 8785	8.788 9333	8.790 9785	8.793 0140	8.795 0400	8.797 0566	25
36	8.786 9128	8.788 9675	8.791 0125	8.793 0479	8.795 0737	8.797 0901	24
37	8.786 9471	8.789 0017	8.791 0465	8.793 0817	8.795 1074	8.797 1237	23
38	8.786 9815	8.789 0358	8.791 0805	8.793 1156	8.795 1411	8.797 1572	22
39	8.787 0158	8.789 0700	8.791 1145	8.793 1494	8.795 1748	8.797 1907	21
40	8.787 0501	8.789 1041	8.791 1485	8.793 1832	8.795 2085	8.797 2242	20
41	8.787 0844	8.789 1383	8.791 1825	8.793 2171	8.795 2421	8.797 2577	19
42	8.787 1187	8.789 1725	8.791 2165	8.793 2509	8.795 2758	8.797 2913	18
43	8.787 1530	8.789 2066	8.791 2505	8.793 2847	8.795 3095	8.797 3248	17
44	8.787 1873	8.789 2407	8.791 2845	8.793 3186	8.795 3431	8.797 3583	16
45	8.787 2216	8.789 2749	8.791 3184	8.793 3524	8.795 3768	8.797 3918	15
46	8.787 2559	8.789 3090	8.791 3524	8.793 3862	8.795 4105	8.797 4253	14
47	8.787 2902	8.789 3432	8.791 3864	8.793 4200	8.795 4441	8.797 4588	13
48	8.787 3245	8.789 3773	8.791 4204	8.793 4538	8.795 4778	8.797 4923	12
49	8.787 3588	8.789 4114	8.791 4543	8.793 4876	8.795 5114	8.797 5258	11
50	8.787 3931	8.789 4455	8.791 4883	8.793 5214	8.795 5451	8.797 5593	10
51	8.787 4274	8.789 4797	8.791 5223	8.793 5552	8.795 5787	8.797 5928	9
52	8.787 4617	8.789 5138	8.791 5562	8.793 5890	8.795 6124	8.797 6263	8
53	8.787 4960	8.789 5479	8.791 5902	8.793 6228	8.795 6460	8.797 6597	7
54	8.787 5302	8.789 5820	8.791 6241	8.793 6566	8.795 6796	8.797 6932	6
55	8.787 5645	8.789 6161	8.791 6581	8.793 6904	8.795 7133	8.797 7267	5
56	8.787 5988	8.789 6503	8.791 6920	8.793 7242	8.795 7469	8.797 7602	4
57	8.787 6331	8.789 6844	8.791 7260	8.793 7580	8.795 7805	8.797 7937	3
58	8.787 6673	8.789 7185	8.791 7599	8.793 7918	8.795 8142	8.797 8271	2
59	8.787 7016	8.789 7526	8.791 7939	8.793 8256	8.795 8478	8.797 8606	1
60	8.787 7359	8.789 7867	8.791 8278	8.793 8594	8.795 8814	8.797 8941	0
″	29′	28′	27′	26′	25′	24′	″

cos 86°

tang 3°

"	30′	31′	32′	33′	34′	35′	"
0	8.786 4861	8.788 5544	8.790 6130	8.792 6620	8.794 7014	8.796 7313	60
1	8.786 5206	8.788 5888	8.790 6472	8.792 6960	8.794 7353	8.796 7651	59
2	8.786 5552	8.788 6232	8.790 6815	8.792 7301	8.794 7692	8.796 7988	58
3	8.786 5897	8.788 6576	8.790 7157	8.792 7642	8.794 8031	8.796 8326	57
4	8.786 6243	8.788 6919	8.790 7499	8.792 7982	8.794 8370	8.796 8663	56
5	8.786 6588	8.788 7263	8.790 7841	8.792 8323	8.794 8709	8.796 9001	55
6	8.786 6934	8.788 7607	8.790 8183	8.792 8663	8.794 9048	8.796 9338	54
7	8.786 7279	8.788 7951	8.790 8525	8.792 9004	8.794 9387	8.796 9675	53
8	8.786 7624	8.788 8294	8.790 8868	8.792 9344	8.794 9726	8.797 0013	52
9	8.786 7970	8.788 8638	8.790 9210	8.792 9685	8.795 0065	8.797 0350	51
10	8.786 8315	8.788 8982	8.790 9552	8.793 0025	8.795 0404	8.797 0687	50
11	8.786 8660	8.788 9325	8.790 9894	8.793 0366	8.795 0742	8.797 1025	49
12	8.786 9005	8.788 9669	8.791 0236	8.793 0706	8.795 1081	8.797 1362	48
13	8.786 9350	8.789 0013	8.791 0578	8.793 1046	8.795 1420	8.797 1699	47
14	8.786 9696	8.789 0356	8.791 0920	8.793 1387	8.795 1759	8.797 2036	46
15	8.787 0041	8.789 0700	8.791 1261	8.793 1727	8.795 2097	8.797 2373	45
16	8.787 0386	8.789 1043	8.791 1603	8.793 2067	8.795 2436	8.797 2711	44
17	8.787 0731	8.789 1387	8.791 1945	8.793 2408	8.795 2775	8.797 3048	43
18	8.787 1076	8.789 1730	8.791 2287	8.793 2748	8.795 3113	8.797 3385	42
19	8.787 1421	8.789 2073	8.791 2629	8.793 3088	8.795 3452	8.797 3722	41
20	8.787 1766	8.789 2417	8.791 2971	8.793 3428	8.795 3791	8.797 4059	40
21	8.787 2111	8.789 2760	8.791 3312	8.793 3768	8.795 4129	8.797 4396	39
22	8.787 2456	8.789 3104	8.791 3654	8.793 4109	8.795 4468	8.797 4733	38
23	8.787 2801	8.789 3447	8.791 3996	8.793 4449	8.795 4806	8.797 5070	37
24	8.787 3146	8.789 3790	8.791 4337	8.793 4789	8.795 5145	8.797 5407	36
25	8.787 3491	8.789 4133	8.791 4679	8.793 5129	8.795 5483	8.797 5744	35
26	8.787 3836	8.789 4477	8.791 5021	8.793 5469	8.795 5822	8.797 6081	34
27	8.787 4180	8.789 4820	8.791 5362	8.793 5809	8.795 6160	8.797 6417	33
28	8.787 4525	8.789 5163	8.791 5704	8.793 6149	8.795 6499	8.797 6754	32
29	8.787 4870	8.789 5506	8.791 6045	8.793 6489	8.795 6837	8.797 7091	31
30	8.787 5215	8.789 5849	8.791 6387	8.793 6829	8.795 7175	8.797 7428	30
31	8.787 5559	8.789 6192	8.791 6728	8.793 7168	8.795 7514	8.797 7765	29
32	8.787 5904	8.789 6535	8.791 7070	8.793 7508	8.795 7852	8.797 8101	28
33	8.787 6249	8.789 6878	8.791 7411	8.793 7848	8.795 8190	8.797 8438	27
34	8.787 6593	8.789 7221	8.791 7753	8.793 8188	8.795 8528	8.797 8775	26
35	8.787 6938	8.789 7564	8.791 8094	8.793 8528	8.795 8867	8.797 9111	25
36	8.787 7283	8.789 7907	8.791 8435	8.793 8867	8.795 9205	8.797 9448	24
37	8.787 7627	8.789 8250	8.791 8777	8.793 9207	8.795 9543	8.797 9785	23
38	8.787 7972	8.789 8593	8.791 9118	8.793 9547	8.795 9881	8.798 0121	22
39	8.787 8316	8.789 8936	8.791 9459	8.793 9887	8.796 0219	8.798 0458	21
40	8.787 8661	8.789 9279	8.791 9800	8.794 0226	8.796 0557	8.798 0794	20
41	8.787 9005	8.789 9622	8.792 0142	8.794 0566	8.796 0895	8.798 1131	19
42	8.787 9349	8.789 9964	8.792 0483	8.794 0905	8.796 1233	8.798 1467	18
43	8.787 9694	8.790 0307	8.792 0824	8.794 1245	8.796 1571	8.798 1804	17
44	8.788 0038	8.790 0650	8.792 1165	8.794 1585	8.796 1909	8.798 2140	16
45	8.788 0382	8.790 0993	8.792 1506	8.794 1924	8.796 2247	8.798 2476	15
46	8.788 0727	8.790 1335	8.792 1847	8.794 2264	8.796 2585	8.798 2813	14
47	8.788 1071	8.790 1678	8.792 2188	8.794 2603	8.796 2923	8.798 3149	13
48	8.788 1415	8.790 2021	8.792 2529	8.794 2943	8.796 3261	8.798 3485	12
49	8.788 1759	8.790 2363	8.792 2870	8.794 3282	8.796 3599	8.798 3822	11
50	8.788 2104	8.790 2706	8.792 3211	8.794 3621	8.796 3937	8.798 4158	10
51	8.788 2448	8.790 3048	8.792 3552	8.794 3961	8.796 4274	8.798 4494	9
52	8.788 2792	8.790 3391	8.792 3893	8.794 4300	8.796 4612	8.798 4830	8
53	8.788 3136	8.790 3733	8.792 4234	8.794 4639	8.796 4950	8.798 5166	7
54	8.788 3480	8.790 4076	8.792 4575	8.794 4979	8.796 5288	8.798 5503	6
55	8.788 3824	8.790 4418	8.792 4916	8.794 5318	8.796 5625	8.798 5839	5
56	8.788 4168	8.790 4761	8.792 5257	8.794 5657	8.796 5963	8.798 6175	4
57	8.788 4512	8.790 5103	8.792 5597	8.794 5996	8.796 6300	8.798 6511	3
58	8.788 4856	8.790 5445	8.792 5938	8.794 6335	8.796 6638	8.798 6847	2
59	8.788 5200	8.790 5788	8.792 6279	8.794 6675	8.796 6976	8.798 7183	1
60	8.788 5544	8.790 6130	8.792 6620	8.794 7014	8.796 7313	8.798 7519	0
"	29′	28′	27′	26′	25′	24′	"

cotg 86°

sin 3°

″	36′	37′	38′	39′	40′	41′	″
0	8.797 8941	8.799 8974	8.801 8915	8.803 8764	8.805 8523	8.807 8192	60
1	8.797 9275	8.799 9307	8.801 9247	8.803 9095	8.805 8852	8.807 8519	59
2	8.797 9610	8.799 9640	8.801 9578	8.803 9425	8.805 9180	8.807 8846	58
3	8.797 9945	8.799 9973	8.801 9910	8.803 9755	8.805 9509	8.807 9173	57
4	8.798 0279	8.800 0306	8.802 0241	8.804 0085	8.805 9837	8.807 9500	56
5	8.798 0614	8.800 0639	8.802 0573	8.804 0414	8.806 0166	8.807 9827	55
6	8.798 0948	8.800 0972	8.802 0904	8.804 0744	8.806 0494	8.808 0154	54
7	8.798 1283	8.800 1305	8.802 1235	8.804 1074	8.806 0823	8.808 0481	53
8	8.798 1617	8.800 1638	8.802 1567	8.804 1404	8.806 1151	8.808 0808	52
9	8.798 1952	8.800 1971	8.802 1898	8.804 1734	8.806 1479	8.808 1135	51
10	8.798 2286	8.800 2304	8.802 2230	8.804 2064	8.806 1808	8.808 1462	50
11	8.798 2620	8.800 2637	8.802 2561	8.804 2394	8.806 2136	8.808 1788	49
12	8.798 2955	8.800 2970	8.802 2892	8.804 2723	8.806 2464	8.808 2115	48
13	8.798 3289	8.800 3302	8.802 3223	8.804 3053	8.806 2792	8.808 2442	47
14	8.798 3624	8.800 3635	8.802 3555	8.804 3383	8.806 3121	8.808 2769	46
15	8.798 3958	8.800 3968	8.802 3886	8.804 3713	8.806 3449	8.808 3095	45
16	8.798 4292	8.800 4301	8.802 4217	8.804 4042	8.806 3777	8.808 3422	44
17	8.798 4626	8.800 4633	8.802 4548	8.804 4372	8.806 4105	8.808 3749	43
18	8.798 4961	8.800 4966	8.802 4879	8.804 4702	8.806 4433	8.808 4075	42
19	8.798 5295	8.800 5299	8.802 5211	8.804 5031	8.806 4761	8.808 4402	41
20	8.798 5629	8.800 5631	8.802 5542	8.804 5361	8.806 5089	8.808 4729	40
21	8.798 5963	8.800 5964	8.802 5873	8.804 5690	8.806 5418	8.808 5055	39
22	8.798 6297	8.800 6296	8.802 6204	8.804 6020	8.806 5746	8.808 5382	38
23	8.798 6631	8.800 6629	8.802 6535	8.804 6349	8.806 6074	8.808 5708	37
24	8.798 6965	8.800 6961	8.802 6866	8.804 6679	8.806 6402	8.808 6035	36
25	8.798 7299	8.800 7294	8.802 7197	8.804 7008	8.806 6729	8.808 6361	35
26	8.798 7633	8.800 7626	8.802 7528	8.804 7338	8.806 7057	8.808 6688	34
27	8.798 7967	8.800 7959	8.802 7859	8.804 7667	8.806 7385	8.808 7014	33
28	8.798 8301	8.800 8291	8.802 8189	8.804 7996	8.806 7713	8.808 7340	32
29	8.798 8635	8.800 8624	8.802 8520	8.804 8326	8.806 8041	8.808 7667	31
30	8.798 8969	8.800 8956	8.802 8851	8.804 8655	8.806 8369	8.808 7993	30
31	8.798 9303	8.800 9288	8.802 9182	8.804 8984	8.806 8697	8.808 8319	29
32	8.798 9637	8.800 9621	8.802 9513	8.804 9314	8.806 9024	8.808 8646	28
33	8.798 9971	8.800 9953	8.802 9843	8.804 9643	8.806 9352	8.808 8972	27
34	8.799 0304	8.801 0285	8.803 0174	8.804 9972	8.806 9680	8.808 9298	26
35	8.799 0638	8.801 0617	8.803 0505	8.805 0301	8.807 0008	8.808 9624	25
36	8.799 0972	8.801 0950	8.803 0836	8.805 0631	8.807 0335	8.808 9951	24
37	8.799 1306	8.801 1282	8.803 1166	8.805 0960	8.807 0663	8.809 0277	23
38	8.799 1639	8.801 1614	8.803 1497	8.805 1289	8.807 0991	8.809 0603	22
39	8.799 1973	8.801 1946	8.803 1828	8.805 1618	8.807 1318	8.809 0929	21
40	8.799 2307	8.801 2278	8.803 2158	8.805 1947	8.807 1646	8.809 1255	20
41	8.799 2640	8.801 2610	8.803 2489	8.805 2276	8.807 1973	8.809 1581	19
42	8.799 2974	8.801 2942	8.803 2819	8.805 2605	8.807 2301	8.809 1907	18
43	8.799 3307	8.801 3274	8.803 3150	8.805 2934	8.807 2628	8.809 2233	17
44	8.799 3641	8.801 3606	8.803 3480	8.805 3263	8.807 2956	8.809 2559	16
45	8.799 3974	8.801 3938	8.803 3811	8.805 3592	8.807 3283	8.809 2885	15
46	8.799 4308	8.801 4270	8.803 4141	8.805 3921	8.807 3611	8.809 3211	14
47	8.799 4641	8.801 4602	8.803 4471	8.805 4250	8.807 3938	8.809 3537	13
48	8.799 4975	8.801 4934	8.803 4802	8.805 4579	8.807 4265	8.809 3863	12
49	8.799 5308	8.801 5266	8.803 5132	8.805 4908	8.807 4593	8.809 4189	11
50	8.799 5642	8.801 5598	8.803 5463	8.805 5236	8.807 4920	8.809 4515	10
51	8.799 5975	8.801 5930	8.803 5793	8.805 5565	8.807 5247	8.809 4841	9
52	8.799 6308	8.801 6262	8.803 6123	8.805 5894	8.807 5575	8.809 5166	8
53	8.799 6642	8.801 6593	8.803 6453	8.805 6223	8.807 5902	8.809 5492	7
54	8.799 6975	8.801 6925	8.803 6784	8.805 6551	8.807 6229	8.809 5818	6
55	8.799 7308	8.801 7257	8.803 7114	8.805 6880	8.807 6556	8.809 6144	5
56	8.799 7641	8.801 7588	8.803 7444	8.805 7209	8.807 6884	8.809 6469	4
57	8.799 7975	8.801 7920	8.803 7774	8.805 7537	8.807 7211	8.809 6795	3
58	8.799 8308	8.801 8252	8.803 8104	8.805 7866	8.807 7538	8.809 7121	2
59	8.799 8641	8.801 8583	8.803 8434	8.805 8195	8.807 7865	8.809 7446	1
60	8.799 8974	8.801 8915	8.803 8764	8.805 8523	8.807 8192	8.809 7772	0
″	23′	22′	21′	20′	19′	18′	″

cos 86°

"	36′	37′	38′	39′	40′	41′	"
0	8.798 7519	8.800 7632	8.802 7653	8.804 7583	8.806 7422	8.808 7172	60
1	8.798 7855	8.800 7966	8.802 7986	8.804 7914	8.806 7752	8.808 7501	59
2	8.798 8191	8.800 8301	8.802 8319	8.804 8246	8.806 8082	8.808 7829	58
3	8.798 8527	8.800 8635	8.802 8652	8.804 8577	8.806 8412	8.808 8158	57
4	8.798 8863	8.800 8970	8.802 8984	8.804 8908	8.806 8742	8.808 8486	56
5	8.798 9199	8.800 9304	8.802 9317	8.804 9240	8.806 9072	8.808 8814	55
6	8.798 9535	8.800 9638	8.802 9650	8.804 9571	8.806 9401	8.808 9143	54
7	8.798 9870	8.800 9973	8.802 9983	8.804 9902	8.806 9731	8.808 9471	53
8	8.799 0206	8.801 0307	8.803 0316	8.805 0233	8.807 0061	8.808 9799	52
9	8.799 0542	8.801 0641	8.803 0648	8.805 0564	8.807 0391	8.809 0127	51
10	8.799 0878	8.801 0975	8.803 0981	8.805 0896	8.807 0720	8.809 0455	50
11	8.799 1213	8.801 1309	8.803 1314	8.805 1227	8.807 1050	8.809 0784	49
12	8.799 1549	8.801 1644	8.803 1646	8.805 1558	8.807 1380	8.809 1112	48
13	8.799 1885	8.801 1978	8.803 1979	8.805 1889	8.807 1709	8.809 1440	47
14	8.799 2220	8.801 2312	8.803 2311	8.805 2220	8.807 2039	8.809 1768	46
15	8.799 2556	8.801 2646	8.803 2644	8.805 2551	8.807 2368	8.809 2096	45
16	8.799 2892	8.801 2980	8.803 2976	8.805 2882	8.807 2698	8.809 2424	44
17	8.799 3227	8.801 3314	8.803 3309	8.805 3213	8.807 3027	8.809 2752	43
18	8.799 3563	8.801 3648	8.803 3641	8.805 3544	8.807 3357	8.809 3080	42
19	8.799 3898	8.801 3982	8.803 3974	8.805 3875	8.807 3686	8.809 3408	41
20	8.799 4234	8.801 4316	8.803 4306	8.805 4206	8.807 4016	8.809 3736	40
21	8.799 4569	8.801 4650	8.803 4639	8.805 4537	8.807 4345	8.809 4064	39
22	8.799 4905	8.801 4984	8.803 4971	8.805 4868	8.807 4674	8.809 4392	38
23	8.799 5240	8.801 5318	8.803 5303	8.805 5199	8.807 5004	8.809 4720	37
24	8.799 5575	8.801 5651	8.803 5636	8.805 5529	8.807 5333	8.809 5048	36
25	8.799 5911	8.801 5985	8.803 5968	8.805 5860	8.807 5662	8.809 5375	35
26	8.799 6246	8.801 6319	8.803 6300	8.805 6191	8.807 5992	8.809 5703	34
27	8.799 6581	8.801 6653	8.803 6633	8.805 6522	8.807 6321	8.809 6031	33
28	8.799 6917	8.801 6987	8.803 6965	8.805 6852	8.807 6650	8.809 6359	32
29	8.799 7252	8.801 7320	8.803 7297	8.805 7183	8.807 6979	8.809 6686	31
30	8.799 7587	8.801 7654	8.803 7629	8.805 7514	8.807 7309	8.809 7014	30
31	8.799 7922	8.801 7988	8.803 7961	8.805 7844	8.807 7638	8.809 7342	29
32	8.799 8257	8.801 8321	8.803 8294	8.805 8175	8.807 7967	8.809 7669	28
33	8.799 8593	8.801 8655	8.803 8626	8.805 8506	8.807 8296	8.809 7997	27
34	8.799 8928	8.801 8988	8.803 8958	8.805 8836	8.807 8625	8.809 8325	26
35	8.799 9263	8.801 9322	8.803 9290	8.805 9167	8.807 8954	8.809 8652	25
36	8.799 9598	8.801 9656	8.803 9622	8.805 9497	8.807 9283	8.809 8980	24
37	8.799 9933	8.801 9989	8.803 9954	8.805 9828	8.807 9612	8.809 9307	23
38	8.800 0268	8.802 0323	8.804 0286	8.806 0158	8.807 9941	8.809 9635	22
39	8.800 0603	8.802 0656	8.804 0618	8.806 0489	8.808 0270	8.809 9962	21
40	8.800 0938	8.802 0989	8.804 0950	8.806 0819	8.808 0599	8.810 0290	20
41	8.800 1273	8.802 1323	8.804 1282	8.806 1150	8.808 0928	8.810 0617	19
42	8.800 1608	8.802 1656	8.804 1613	8.806 1480	8.808 1257	8.810 0945	18
43	8.800 1943	8.802 1990	8.804 1945	8.806 1810	8.808 1586	8.810 1272	17
44	8.800 2278	8.802 2323	8.804 2277	8.806 2141	8.808 1914	8.810 1599	16
45	8.800 2612	8.802 2656	8.804 2609	8.806 2471	8.808 2243	8.810 1927	15
46	8.800 2947	8.802 2990	8.804 2941	8.806 2801	8.808 2572	8.810 2254	14
47	8.800 3282	8.802 3323	8.804 3272	8.806 3131	8.808 2901	8.810 2581	13
48	8.800 3617	8.802 3656	8.804 3604	8.806 3462	8.808 3230	8.810 2909	12
49	8.800 3952	8.802 3989	8.804 3936	8.806 3792	8.808 3558	8.810 3236	11
50	8.800 4286	8.802 4323	8.804 4267	8.806 4122	8.808 3887	8.810 3563	10
51	8.800 4621	8.802 4656	8.804 4599	8.806 4452	8.808 4216	8.810 3890	9
52	8.800 4956	8.802 4989	8.804 4931	8.806 4782	8.808 4544	8.810 4217	8
53	8.800 5290	8.802 5322	8.804 5262	8.806 5112	8.808 4873	8.810 4545	7
54	8.800 5625	8.802 5655	8.804 5594	8.806 5442	8.808 5201	8.810 4872	6
55	8.800 5959	8.802 5988	8.804 5925	8.806 5773	8.808 5530	8.810 5199	5
56	8.800 6294	8.802 6321	8.804 6257	8.806 6103	8.808 5859	8.810 5526	4
57	8.800 6629	8.802 6654	8.804 6588	8.806 6433	8.808 6187	8.810 5853	3
58	8.800 6963	8.802 6987	8.804 6920	8.806 6762	8.808 6516	8.810 6180	2
59	8.800 7298	8.802 7320	8.804 7251	8.806 7092	8.808 6844	8.810 6507	1
60	8.800 7632	8.802 7653	8.804 7583	8.806 7422	8.808 7172	8.810 6834	0
"	23′	22′	21′	20′	19′	18′	"

sin 3°

″	42′	43′	44′	45′	46′	47′	″
0	8.809 7772	8.811 7264	8.813 6668	8.815 5985	8.817 5217	8.819 4363	60
1	8.809 8098	8.811 7588	8.813 6990	8.815 6307	8.817 5537	8.819 4682	59
2	8.809 8423	8.811 7912	8.813 7313	8.815 6628	8.817 5856	8.819 5000	58
3	8.809 8749	8.811 8236	8.813 7636	8.815 6949	8.817 6176	8.819 5318	57
4	8.809 9074	8.811 8560	8.813 7958	8.815 7270	8.817 6496	8.819 5637	56
5	8.809 9400	8.811 8884	8.813 8281	8.815 7591	8.817 6816	8.819 5955	55
6	8.809 9725	8.811 9208	8.813 8603	8.815 7912	8.817 7135	8.819 6273	54
7	8.810 0051	8.811 9532	8.813 8926	8.815 8233	8.817 7455	8.819 6592	53
8	8.810 0376	8.811 9856	8.813 9248	8.815 8554	8.817 7775	8.819 6910	52
9	8.810 0701	8.812 0180	8.813 9571	8.815 8875	8.817 8094	8.819 7228	51
10	8.810 1027	8.812 0504	8.813 9893	8.815 9196	8.817 8414	8.819 7546	50
11	8.810 1352	8.812 0828	8.814 0216	8.815 9517	8.817 8733	8.819 7864	49
12	8.810 1677	8.822 1151	8.814 0538	8.815 9838	8.817 9053	8.819 8182	48
13	8.810 2003	8.812 1475	8.814 0861	8.816 0159	8.817 9372	8.819 8501	47
14	8.810 2328	8.812 1799	8.814 1183	8.816 0480	8.817 9692	8.819 8819	46
15	8.810 2653	8.812 2123	8.814 1505	8.816 0801	8.818 0011	8.819 9137	45
16	8.810 2978	8.812 2447	8.814 1828	8.816 1122	8.818 0331	8.819 9455	44
17	8.810 3304	8.812 2770	8.814 2150	8.816 1443	8.818 0650	8.819 9773	43
18	8.810 3629	8.812 3094	8.814 2472	8.816 1764	8.818 0970	8.820 0091	42
19	8.810 3954	8.812 3418	8.814 2794	8.816 2085	8.818 1289	8.820 0409	41
20	8.810 4279	8.812 3741	8.814 3117	8.816 2405	8.818 1608	8.820 0727	40
21	8.810 4604	8.812 4065	8.814 3439	8.816 2726	8.818 1928	8.820 1045	39
22	8.810 4929	8.812 4389	8.814 3761	8.816 3047	8.818 2247	8.820 1362	38
23	8.810 5254	8.812 4712	8.814 4083	8.816 3367	8.818 2566	8.820 1680	37
24	8.810 5579	8.812 5036	8.814 4405	8.816 3688	8.818 2886	8.820 1998	36
25	8.810 5904	8.812 5359	8.814 4727	8.816 4009	8.818 3205	8.820 2316	35
26	8.810 6229	8.812 5683	8.814 5049	8.816 4329	8.818 3524	8.820 2634	34
27	8.810 6554	8.812 6006	8.814 5371	8.816 4650	8.818 3843	8.820 2952	33
28	8.810 6879	8.812 6330	8.814 5693	8.816 4971	8.818 4162	8.820 3269	32
29	8.810 7204	8.812 6653	8.814 6015	8.816 5291	8.818 4482	8.820 3587	31
30	8.810 7529	8.812 6977	8.814 6337	8.816 5612	8.818 4801	8.820 3905	30
31	8.810 7854	8.812 7300	8.814 6659	8.816 5932	8.818 5120	8.820 4222	29
32	8.810 8178	8.812 7623	8.814 6981	8.816 6253	8.818 5439	8.820 4540	28
33	8.810 8503	8.812 7947	8.814 7303	8.816 6573	8.818 5758	8.820 4858	27
34	8.810 8828	8.812 8270	8.814 7625	8.816 6894	8.818 6077	8.820 5175	26
35	8.810 9153	8.812 8593	8.814 7947	8.816 7214	8.818 6396	8.820 5493	25
36	8.810 9478	8.812 8917	8.814 8269	8.816 7534	8.818 6715	8.820 5811	24
37	8.810 9802	8.812 9240	8.814 8590	8.816 7855	8.818 7034	8.820 6128	23
38	8.811 0127	8.812 9563	8.814 8912	8.816 8175	8.818 7353	8.820 6446	22
39	8.811 0452	8.812 9886	8.814 9234	8.816 8496	8.818 7672	8.820 6763	21
40	8.811 0776	8.813 0209	8.814 9556	8.816 8816	8.818 7991	8.820 7081	20
41	8.811 1101	8.813 0533	8.814 9877	8.816 9136	8.818 8309	8.820 7398	19
42	8.811 1425	8.813 0856	8.815 0199	8.816 9456	8.818 8628	8.820 7716	18
43	8.811 1750	8.813 1179	8.815 0521	8.816 9777	8.818 8947	8.820 8033	17
44	8.811 2074	8.813 1502	8.815 0842	8.817 0097	8.818 9266	8.820 8350	16
45	8.811 2399	8.813 1825	8.815 1164	8.817 0417	8.818 9585	8.820 8668	15
46	8.811 2723	8.813 2148	8.815 1486	8.817 0737	8.818 9903	8.820 8985	14
47	8.811 3048	8.813 2471	8.815 1807	8.817 1057	8.819 0222	8.820 9302	13
48	8.811 3372	8.813 2794	8.815 2129	8.817 1377	8.819 0541	8.820 9620	12
49	8.811 3697	8.813 3117	8.815 2450	8.817 1697	8.819 0859	8.820 9937	11
50	8.811 4021	8.813 3440	8.815 2772	8.817 2018	8.819 1178	8.821 0254	10
51	8.811 4345	8.813 3763	8.815 3093	8.817 2338	8.819 1497	8.821 0571	9
52	8.811 4670	8.813 4086	8.815 3415	8.817 2658	8.819 1815	8.821 0889	8
53	8.811 4994	8.813 4408	8.815 3736	8.817 2978	8.819 2134	8.821 1206	7
54	8.811 5318	8.813 4731	8.815 4057	8.817 3298	8.819 2452	8.821 1523	6
55	8.811 5643	8.813 5054	8.815 4379	8.817 3617	8.819 2771	8.821 1840	5
56	8.811 5967	8.813 5377	8.815 4700	8.817 3937	8.819 3089	8.821 2157	4
57	8.811 6291	8.813 5700	8.815 5021	8.817 4257	8.819 3408	8.821 2474	3
58	8.811 6615	8.813 6022	8.815 5343	8.817 4577	8.819 3726	8.821 2791	2
59	8.811 6939	8.813 6345	8.815 5664	8.817 4897	8.819 4045	8.821 3108	1
60	8.811 7264	8.813 6668	8.815 5985	8.817 5217	8.819 4363	8.821 3425	0
″	17′	16′	15′	14′	13′	12′	″

cos 86°

″	42′	43′	44′	45′	46′	47′	″
0	8.810 6834	8.812 6407	8.814 5894	8.816 5294	8.818 4608	8.820 3838	60
1	8.810 7161	8.812 6733	8.814 6218	8.816 5616	8.818 4930	8.820 4158	59
2	8.810 7488	8.812 7058	8.814 6542	8.816 5939	8.818 5251	8.820 4478	58
3	8.810 7815	8.812 7384	8.814 6866	8.816 6262	8.818 5572	8.820 4797	57
4	8.810 8141	8.812 7709	8.814 7190	8.816 6584	8.818 5893	8.820 5117	56
5	8.810 8468	8.812 8034	8.814 7514	8.816 6907	8.818 6214	8.820 5437	55
6	8.810 8795	8.812 8360	8.814 7838	8.816 7229	8.818 6535	8.820 5757	54
7	8.810 9122	8.812 8685	8.814 8161	8.816 7552	8.818 6856	8.820 6076	53
8	8.810 9449	8.812 9011	8.814 8485	8.816 7874	8.818 7177	8.820 6396	52
9	8.810 9775	8.812 9336	8.814 8809	8.816 8196	8.818 7498	8.820 6715	51
10	8.811 0102	8.812 9661	8.814 9133	8.816 8519	8.818 7819	8.820 7035	50
11	8.811 0429	8.812 9986	8.814 9457	8.816 8841	8.818 8140	8.820 7354	49
12	8.811 0756	8.813 0312	8.814 9781	8.816 9164	8.818 8461	8.820 7674	48
13	8.811 1082	8.813 0637	8.815 0104	8.816 9486	8.818 8782	8.820 7994	47
14	8.811 1409	8.813 0962	8.815 0428	8.816 9808	8.818 9103	8.820 8313	46
15	8.811 1735	8.813 1287	8.815 0752	8.817 0130	8.818 9424	8.820 8632	45
16	8.811 2062	8.813 1612	8.815 1075	8.817 0453	8.818 9745	8.820 8952	44
17	8.811 2389	8.813 1937	8.815 1399	8.817 0775	8.819 0065	8.820 9271	43
18	8.811 2715	8.813 2262	8.815 1723	8.817 1097	8.819 0386	8.820 9591	42
19	8.811 3042	8.813 2587	8.815 2046	8.817 1419	8.819 0707	8.820 9910	41
20	8.811 3368	8.813 2912	8.815 2370	8.817 1741	8.819 1028	8.821 0229	40
21	8.811 3694	8.813 3237	8.815 2694	8.817 2064	8.819 1348	8.821 0549	39
22	8.811 4021	8.813 3562	8.815 3017	8.817 2386	8.819 1669	8.821 0868	38
23	8.811 4347	8.813 3887	8.815 3341	8.817 2708	8.819 1990	8.821 1187	37
24	8.811 4674	8.813 4212	8.815 3664	8.817 3030	8.819 2310	8.821 1507	36
25	8.811 5000	8.813 4537	8.815 3988	8.817 3352	8.819 2631	8.821 1826	35
26	8.811 5326	8.813 4862	8.815 4311	8.817 3674	8.819 2952	8.821 2145	34
27	8.811 5653	8.813 5187	8.815 4634	8.817 3996	8.819 3272	8.821 2464	33
28	8.811 5979	8.813 5512	8.815 4958	8.817 4318	8.819 3593	8.821 2783	32
29	8.811 6305	8.813 5837	8.815 5281	8.817 4640	8.819 3913	8.821 3102	31
30	8.811 6631	8.813 6161	8.815 5605	8.817 4962	8.819 4234	8.821 3422	30
31	8.811 6958	8.813 6486	8.815 5928	8.817 5284	8.819 4554	8.821 3741	29
32	8.811 7284	8.813 6811	8.815 6251	8.817 5606	8.819 4875	8.821 4060	28
33	8.811 7610	8.813 7136	8.815 6574	8.817 5927	8.819 5195	8.821 4379	27
34	8.811 7936	8.813 7460	8.815 6898	8.817 6249	8.819 5516	8.821 4698	26
35	8.811 8262	8.813 7785	8.815 7221	8.817 6571	8.819 5836	8.821 5017	25
36	8.811 8588	8.813 8110	8.815 7544	8.817 6893	8.819 6156	8.821 5336	24
37	8.811 8914	8.813 8434	8.815 7867	8.817 7215	8.819 6477	8.821 5655	23
38	8.811 9241	8.813 8759	8.815 8190	8.817 7536	8.819 6797	8.821 5974	22
39	8.811 9567	8.813 9083	8.815 8514	8.817 7858	8.819 7117	8.821 6292	21
40	8.811 9893	8.813 9408	8.815 8837	8.817 8180	8.819 7438	8.821 6611	20
41	8.812 0218	8.813 9732	8.815 9160	8.817 8501	8.819 7758	8.821 6930	19
42	8.812 0544	8.814 0057	8.815 9483	8.817 8823	8.819 8078	8.821 7249	18
43	8.812 0870	8.814 0381	8.815 9806	8.817 9145	8.819 8398	8.821 7568	17
44	8.812 1196	8.814 0706	8.816 0129	8.817 9466	8.819 8718	8.821 7887	16
45	8.812 1522	8.814 1030	8.816 0452	8.817 9788	8.819 9039	8.821 8205	15
46	8.812 1848	8.814 1355	8.816 0775	8.818 0109	8.819 9359	8.821 8524	14
47	8.812 2174	8.814 1679	8.816 1098	8.818 0431	8.819 9679	8.821 8843	13
48	8.812 2500	8.814 2003	8.816 1421	8.818 0752	8.819 9999	8.821 9161	12
49	8.812 2825	8.814 2328	8.816 1744	8.818 1074	8.820 0319	8.821 9480	11
50	8.812 3151	8.814 2652	8.816 2066	8.818 1395	8.820 0639	8.821 9799	10
51	8.812 3477	8.814 2976	8.816 2389	8.818 1717	8.820 0959	8.822 0117	9
52	8.812 3803	8.814 3301	8.816 2712	8.818 2038	8.820 1279	8.822 0436	8
53	8.812 4128	8.814 3625	8.816 3035	8.818 2359	8.820 1599	8.822 0755	7
54	8.812 4454	8.814 3949	8.816 3358	8.818 2681	8.820 1919	8.822 1073	6
55	8.812 4780	8.814 4273	8.816 3680	8.818 3002	8.820 2239	8.822 1392	5
56	8.812 5105	8.814 4597	8.816 4003	8.818 3323	8.820 2559	8.822 1710	4
57	8.812 5431	8.814 4921	8.816 4326	8.818 3645	8.820 2879	8.822 2029	3
58	8.812 5756	8.814 5246	8.816 4649	8.818 3966	8.820 3199	8.822 2347	2
59	8.812 6082	8.814 5570	8.816 4971	8.818 4287	8.820 3518	8.822 2666	1
60	8.812 6407	8.814 5894	8.816 5294	8.818 4608	8.820 3838	8.822 2984	0
″	17′	16′	15′	14′	13′	12′	″

cotg 86°

sin 3°

″	48′	49′	50′	51′	52′	53′	″
0	8.821 3425	8.823 2404	8.825 1299	8.827 0112	8.828 8844	8.830 7495	60
1	8.821 3742	8.823 2719	8.825 1613	8.827 0425	8.828 9155	8.830 7805	59
2	8.821 4059	8.823 3035	8.825 1928	8.827 0738	8.828 9467	8.830 8115	58
3	8.821 4376	8.823 3350	8.825 2242	8.827 1051	8.828 9778	8.830 8425	57
4	8.821 4693	8.823 3666	8.825 2556	8.827 1364	8.829 0090	8.830 8735	56
5	8.821 5010	8.823 3981	8.825 2870	8.827 1676	8.829 0401	8.830 9045	55
6	8.821 5327	8.823 4297	8.825 3184	8.827 1989	8.829 0713	8.830 9356	54
7	8.821 5644	8.823 4612	8.825 3498	8.827 2302	8.829 1024	8.830 9666	53
8	8.821 5961	8.823 4928	8.825 3812	8.827 2615	8.829 1335	8.830 9976	52
9	8.821 6277	8.823 5243	8.825 4126	8.827 2927	8.829 1647	8.831 0286	51
10	8.821 6594	8.823 5559	8.825 4440	8.827 3240	8.829 1958	8.831 0596	50
11	8.821 6911	8.823 5874	8.825 4754	8.827 3552	8.829 2269	8.831 0905	49
12	8.821 7228	8.823 6189	8.825 5068	8.827 3865	8.829 2581	8.831 1215	48
13	8.821 7544	8.823 6505	8.825 5382	8.827 4178	8.829 2892	8.831 1525	47
14	8.821 7861	8.823 6820	8.825 5696	8.827 4490	8.829 3203	8.831 1835	46
15	8.821 8178	8.823 7135	8.825 6010	8.827 4803	8.829 3514	8.831 2145	45
16	8.821 8494	8.823 7451	8.825 6324	8.827 5115	8.829 3825	8.831 2455	44
17	8.821 8811	8.823 7766	8.825 6638	8.827 5428	8.829 4137	8.831 2765	43
18	8.821 9128	8.823 8081	8.825 6952	8.827 5740	8.829 4448	8.831 3074	42
19	8.821 9444	8.823 8396	8.825 7265	8.827 6053	8.829 4759	8.831 3384	41
20	8.821 9761	8.823 8711	8.825 7579	8.827 6365	8.829 5070	8.831 3694	40
21	8.822 0077	8.823 9026	8.825 7893	8.827 6678	8.829 5381	8.831 4004	39
22	8.822 0394	8.823 9342	8.825 8207	8.827 6990	8.829 5692	8.831 4313	38
23	8.822 0710	8.823 9657	8.825 8520	8.827 7302	8.829 6003	8.831 4623	37
24	8.822 1027	8.823 9972	8.825 8834	8.827 7615	8.829 6314	8.831 4933	36
25	8.822 1343	8.824 0287	8.825 9148	8.827 7927	8.829 6625	8.831 5242	35
26	8.822 1659	8.824 0602	8.825 9462	8.827 8239	8.829 6936	8.831 5552	34
27	8.822 1976	8.824 0917	8.825 9775	8.827 8552	8.829 7247	8.831 5862	33
28	8.822 2292	8.824 1232	8.826 0089	8.827 8864	8.829 7558	8.831 6171	32
29	8.822 2609	8.824 1547	8.826 0402	8.827 9176	8.829 7869	8.831 6481	31
30	8.822 2925	8.824 1862	8.826 0716	8.827 9488	8.829 8179	8.831 6790	30
31	8.822 3241	8.824 2177	8.826 1029	8.827 9800	8.829 8490	8.831 7100	29
32	8.822 3557	8.824 2491	8.826 1343	8.828 0113	8.829 8801	8.831 7409	28
33	8.822 3874	8.824 2806	8.826 1656	8.828 0425	8.829 9112	8.831 7719	27
34	8.822 4190	8.824 3121	8.826 1970	8.828 0737	8.829 9423	8.831 8028	26
35	8.822 4506	8.824 3436	8.826 2283	8.828 1049	8.829 9733	8.831 8337	25
36	8.822 4822	8.824 3751	8.826 2597	8.828 1361	8.830 0044	8.831 8647	24
37	8.822 5138	8.824 4066	8.826 2910	8.828 1673	8.830 0355	8.831 8956	23
38	8.822 5455	8.824 4380	8.826 3224	8.828 1985	8.830 0666	8.831 9266	22
39	8.822 5771	8.824 4695	8.826 3537	8.828 2297	8.830 0976	8.831 9575	21
40	8.822 6087	8.824 5010	8.826 3850	8.828 2609	8.830 1287	8.831 9884	20
41	8.822 6403	8.824 5324	8.826 4164	8.828 2921	8.830 1597	8.832 0193	19
42	8.822 6719	8.824 5639	8.826 4477	8.828 3233	8.830 1908	8.832 0503	18
43	8.822 7035	8.824 5954	8.826 4790	8.828 3545	8.830 2219	8.832 0812	17
44	8.822 7351	8.824 6268	8.826 5103	8.828 3857	8.830 2529	8.832 1121	16
45	8.822 7667	8.824 6583	8.826 5417	8.828 4169	8.830 2840	8.832 1430	15
46	8.822 7983	8.824 6898	8.826 5730	8.828 4480	8.830 3150	8.832 1740	14
47	8.822 8299	8.824 7212	8.826 6043	8.828 4792	8.830 3461	8.832 2049	13
48	8.822 8615	8.824 7527	8.826 6356	8.828 5104	8.830 3771	8.832 2358	12
49	8.822 8931	8.824 7841	8.826 6669	8.828 5416	8.830 4082	8.832 2667	11
50	8.822 9246	8.824 8156	8.826 6982	8.828 5728	8.830 4392	8.832 2976	10
51	8.822 9562	8.824 8470	8.826 7296	8.828 6039	8.830 4702	8.832 3285	9
52	8.822 9878	8.824 8784	8.826 7609	8.828 6351	8.830 5013	8.832 3594	8
53	8.823 0194	8.824 9099	8.826 7922	8.828 6663	8.830 5323	8.832 3903	7
54	8.823 0510	8.824 9413	8.826 8235	8.828 6974	8.830 5633	8.832 4212	6
55	8.823 0825	8.824 9728	8.826 8548	8.828 7286	8.830 5944	8.832 4521	5
56	8.823 1141	8.825 0042	8.826 8861	8.828 7598	8.830 6254	8.832 4830	4
57	8.823 1457	8.825 0356	8.826 9174	8.828 7909	8.830 6564	8.832 5139	3
58	8.823 1772	8.825 0671	8.826 9486	8.828 8221	8.830 6874	8.832 5448	2
59	8.823 2088	8.825 0985	8.826 9799	8.828 8532	8.830 7185	8.832 5757	1
60	8.823 2404	8.825 1299	8.827 0112	8.828 8844	8.830 7495	8.832 6066	0
″	11′	10′	9′	8′	7′	6′	″

cos 86°

tang 3°

″	48′	49′	50′	51′	52′	53′	″
0	8.822 2984	8.824 2046	8.826 1026	8.827 9924	8.829 8741	8.831 7478	60
1	8.822 3302	8.824 2363	8.826 1342	8.828 0239	8.829 9054	8.831 7789	59
2	8.822 3621	8.824 2680	8.826 1657	8.828 0553	8.829 9367	8.831 8101	58
3	8.822 3939	8.824 2997	8.826 1973	8.828 0867	8.829 9680	8.831 8412	57
4	8.822 4257	8.824 3314	8.826 2289	8.828 1181	8.829 9993	8.831 8724	56
5	8.822 4576	8.824 3631	8.826 2604	8.828 1495	8.830 0306	8.831 9035	55
6	8.822 4894	8.824 3948	8.826 2920	8.828 1810	8.830 0618	8.831 9347	54
7	8.822 5212	8.824 4265	8.826 3235	8.828 2124	8.830 0931	8.831 9658	53
8	8.822 5530	8.824 4582	8.826 3551	8.828 2438	8.830 1244	8.831 9970	52
9	8.822 5849	8.824 4899	8.826 3866	8.828 2752	8.830 1557	8.832 0281	51
10	8.822 6167	8.824 5215	8.826 4182	8.828 3066	8.830 1869	8.832 0593	50
11	8.822 6485	8.824 5532	8.826 4497	8.828 3380	8.830 2182	8.832 0904	49
12	8.822 6803	8.824 5849	8.826 4812	8.828 3694	8.830 2495	8.832 1215	48
13	8.822 7121	8.824 6166	8.826 5128	8.828 4008	8.830 2808	8.832 1527	47
14	8.822 7439	8.824 6482	8.826 5443	8.828 4322	8.830 3120	8.832 1838	46
15	8.822 7757	8.824 6799	8.826 5758	8.828 4636	8.830 3433	8.832 2149	45
16	8.822 8075	8.824 7116	8.826 6074	8.828 4950	8.830 3745	8.832 2460	44
17	8.822 8393	8.824 7432	8.826 6389	8.828 5264	8.830 4058	8.832 2772	43
18	8.822 8711	8.824 7749	8.826 6704	8.828 5578	8.830 4371	8.832 3083	42
19	8.822 9029	8.824 8066	8.826 7019	8.828 5892	8.830 4683	8.832 3394	41
20	8.822 9347	8.824 8382	8.826 7335	8.828 6206	8.830 4996	8.832 3705	40
21	8.822 9665	8.824 8699	8.826 7650	8.828 6519	8.830 5308	8.832 4016	39
22	8.822 9983	8.824 9015	8.826 7965	8.828 6833	8.830 5620	8.832 4328	38
23	8.823 0301	8.824 9332	8.826 8280	8.828 7147	8.830 5933	8.832 4639	37
24	8.823 0619	8.824 9648	8.826 8595	8.828 7461	8.830 6245	8.832 4950	36
25	8.823 0937	8.824 9965	8.826 8910	8.828 7774	8.830 6558	8.832 5261	35
26	8.823 1254	8.825 0281	8.826 9225	8.828 8088	8.830 6870	8.832 5572	34
27	8.823 1572	8.825 0597	8.826 9540	8.828 8402	8.830 7182	8.832 5883	33
28	8.823 1890	8.825 0914	8.826 9855	8.828 8716	8.830 7495	8.832 6194	32
29	8.823 2208	8.825 1230	8.827 0170	8.828 9029	8.830 7807	8.832 6505	31
30	8.823 2526	8.825 1547	8.827 0485	8.828 9343	8.830 8119	8.832 6816	30
31	8.823 2843	8.825 1863	8.827 0800	8.828 9656	8.830 8432	8.832 7127	29
32	8.823 3161	8.825 2179	8.827 1115	8.828 9970	8.830 8744	8.832 7438	28
33	8.823 3479	8.825 2495	8.827 1430	8.829 0284	8.830 9056	8.832 7749	27
34	8.823 3796	8.825 2812	8.827 1745	8.829 0597	8.830 9368	8.832 8059	26
35	8.823 4114	8.825 3128	8.827 2060	8.829 0911	8.830 9680	8.832 8370	25
36	8.823 4431	8.825 3444	8.827 2375	8.829 1224	8.830 9993	8.832 8681	24
37	8.823 4749	8.825 3760	8.827 2690	8.829 1538	8.831 0305	8.832 8992	23
38	8.823 5066	8.825 4077	8.827 3004	8.829 1851	8.831 0617	8.832 9303	22
39	8.823 5384	8.825 4393	8.827 3319	8.829 2164	8.831 0929	8.832 9613	21
40	8.823 5701	8.825 4709	8.827 3634	8.829 2478	8.831 1241	8.832 9924	20
41	8.823 6019	8.825 5025	8.827 3949	8.829 2791	8.831 1553	8.833 0235	19
42	8.823 6336	8.825 5341	8.827 4263	8.829 3105	8.831 1865	8.833 0546	18
43	8.823 6654	8.825 5657	8.827 4578	8.829 3418	8.831 2177	8.833 0856	17
44	8.823 6971	8.825 5973	8.827 4893	8.829 3731	8.831 2489	8.833 1167	16
45	8.823 7289	8.825 6289	8.827 5207	8.829 4045	8.831 2801	8.833 1478	15
46	8.823 7606	8.825 6605	8.827 5522	8.829 4358	8.831 3113	8.833 1788	14
47	8.823 7923	8.825 6921	8.827 5837	8.829 4671	8.831 3425	8.833 2099	13
48	8.823 8241	8.825 7237	8.827 6151	8.829 4984	8.831 3737	8.833 2409	12
49	8.823 8558	8.825 7553	8.827 6466	8.829 5297	8.831 4049	8.833 2720	11
50	8.823 8875	8.825 7869	8.827 6780	8.829 5611	8.831 4360	8.833 3030	10
51	8.823 9192	8.825 8185	8.827 7095	8.829 5924	8.831 4672	8.833 3341	9
52	8.823 9509	8.825 8500	8.827 7409	8.829 6237	8.831 4984	8.833 3651	8
53	8.823 9827	8.825 8816	8.827 7724	8.829 6550	8.831 5296	8.833 3962	7
54	8.824 0144	8.825 9132	8.827 8038	8.829 6863	8.831 5608	8.833 4272	6
55	8.824 0461	8.825 9448	8.827 8353	8.829 7176	8.831 5919	8.833 4583	5
56	8.824 0778	8.825 9763	8.827 8667	8.829 7489	8.831 6231	8.833 4893	4
57	8.824 1095	8.826 0079	8.827 8981	8.829 7802	8.831 6543	8.833 5203	3
58	8.824 1412	8.826 0395	8.827 9296	8.829 8115	8.831 6854	8.833 5514	2
59	8.824 1729	8.826 0711	8.827 9610	8.829 8428	8.831 7166	8.833 5824	1
60	8.824 2046	8.826 1026	8.827 9924	8.829 8741	8.831 7478	8.833 6134	0
″	11′	10′	9′	8′	7′	6′	″

cotg 86°

sin 3°

″	54′	55′	56′	57′	58′	59′	″
0	8.832 6066	8.834 4557	8.836 2969	8.838 1304	8.839 9561	8.841 7741	60
1	8.832 6374	8.834 4864	8.836 3276	8.838 1609	8.839 9865	8.841 8043	59
2	8.832 6683	8.834 5172	8.836 3582	8.838 1914	8.840 0168	8.841 8346	58
3	8.832 6992	8.834 5479	8.836 3888	8.838 2219	8.840 0472	8.841 8648	57
4	8.832 7301	8.834 5787	8.836 4194	8.838 2523	8.840 0775	8.841 8950	56
5	8.832 7610	8.834 6094	8.836 4500	8.838 2828	8.840 1079	8.841 9253	55
6	8.832 7918	8.834 6402	8.836 4806	8.838 3133	8.840 1382	8.841 9555	54
7	8.832 8227	8.834 6709	8.836 5112	8.838 3438	8.840 1686	8.841 9857	53
8	8.832 8536	8.834 7016	8.836 5419	8.838 3743	8.840 1989	8.842 0159	52
9	8.832 8844	8.834 7324	8.836 5725	8.838 4047	8.840 2293	8.842 0462	51
10	8.832 9153	8.834 7631	8.836 6031	8.838 4352	8.840 2596	8.842 0764	50
11	8.832 9462	8.834 7938	8.836 6337	8.838 4657	8.840 2900	8.842 1066	49
12	8.832 9770	8.834 8246	8.836 6643	8.838 4961	8.840 3203	8.842 1368	48
13	8.833 0079	8.834 8553	8.836 6949	8.838 5266	8.840 3506	8.842 1670	47
14	8.833 0387	8.834 8860	8.836 7254	8.838 5571	8.840 3810	8.842 1972	46
15	8.833 0696	8.834 9167	8.836 7560	8.838 5875	8.840 4113	8.842 2274	45
16	8.833 1004	8.834 9475	8.836 7866	8.838 6180	8.840 4416	8.842 2576	44
17	8.833 1313	8.834 9782	8.836 8172	8.838 6485	8.840 4720	8.842 2878	43
18	8.833 1621	8.835 0089	8.836 8478	8.838 6789	8.840 5023	8.842 3180	42
19	8.833 1930	8.835 0396	8.836 8784	8.838 7094	8.840 5326	8.842 3482	41
20	8.833 2238	8.835 0703	8.836 9090	8.838 7398	8.840 5629	8.842 3784	40
21	8.833 2547	8.835 1010	8.836 9395	8.838 7703	8.840 5933	8.842 4086	39
22	8.833 2855	8.835 1317	8.836 9701	8.838 8007	8.840 6236	8.842 4388	38
23	8.833 3163	8.835 1624	8.837 0007	8.838 8312	8.840 6539	8.842 4690	37
24	8.833 3472	8.835 1931	8.837 0313	8.838 8616	8.840 6842	8.842 4992	36
25	8.833 3780	8.835 2238	8.837 0618	8.838 8920	8.840 7145	8.842 5294	35
26	8.833 4088	8.835 2545	8.837 0924	8.838 9225	8.840 7448	8.842 5596	34
27	8.833 4396	8.835 2852	8.837 1230	8.838 9529	8.840 7751	8.842 5897	33
28	8.833 4705	8.835 3159	8.837 1535	8.838 9833	8.840 8055	8.842 6199	32
29	8.833 5013	8.835 3466	8.837 1841	8.839 0138	8.840 8358	8.842 6501	31
30	8.833 5321	8.835 3773	8.837 2146	8.839 0442	8.840 8661	8.842 6803	30
31	8.833 5629	8.835 4080	8.837 2452	8.839 0746	8.840 8964	8.842 7104	29
32	8.833 5937	8.835 4387	8.837 2758	8.839 1051	8.840 9267	8.842 7406	28
33	8.833 6246	8.835 4694	8.837 3063	8.839 1355	8.840 9569	8.842 7708	27
34	8.833 6554	8.835 5000	8.837 3369	8.839 1659	8.840 9872	8.842 8009	26
35	8.833 6862	8.835 5307	8.837 3674	8.839 1963	8.841 0175	8.842 8311	25
36	8.833 7170	8.835 5614	8.837 3979	8.839 2267	8.841 0478	8.842 8613	24
37	8.833 7478	8.835 5921	8.837 4285	8.839 2572	8.841 0781	8.842 8914	23
38	8.833 7786	8.835 6227	8.837 4590	8.839 2876	8.841 1084	8.842 9216	22
39	8.833 8094	8.835 6534	8.837 4896	8.839 3180	8.841 1387	8.842 9517	21
40	8.833 8402	8.835 6841	8.837 5201	8.839 3484	8.841 1690	8.842 9819	20
41	8.833 8710	8.835 7147	8.837 5506	8.839 3788	8.841 1992	8.843 0120	19
42	8.833 9018	8.835 7454	8.837 5812	8.839 4092	8.841 2295	8.843 0422	18
43	8.833 9326	8.835 7761	8.837 6117	8.839 4396	8.841 2598	8.843 0723	17
44	8.833 9634	8.835 8067	8.837 6422	8.839 4700	8.841 2901	8.843 1025	16
45	8.833 9941	8.835 8374	8.837 6728	8.839 5004	8.841 3203	8.843 1326	15
46	8.834 0249	8.835 8680	8.837 7033	8.839 5308	8.841 3506	8.843 1628	14
47	8.834 0557	8.835 8987	8.837 7338	8.839 5612	8.841 3809	8.843 1929	13
48	8.834 0865	8.835 9293	8.837 7643	8.839 5916	8.841 4111	8.843 2230	12
49	8.834 1173	8.835 9600	8.837 7948	8.839 6220	8.841 4414	8.843 2532	11
50	8.834 1481	8.835 9906	8.837 8254	8.839 6523	8.841 4716	8.843 2833	10
51	8.834 1788	8.836 0213	8.837 8559	8.839 6827	8.841 5019	8.843 3134	9
52	8.834 2096	8.836 0519	8.837 8864	8.839 7131	8.841 5322	8.843 3436	8
53	8.834 2404	8.836 0825	8.837 9169	8.839 7435	8.841 5624	8.843 3737	7
54	8.834 2711	8.836 1132	8.837 9474	8.839 7739	8.841 5927	8.843 4038	6
55	8.834 3019	8.836 1438	8.837 9779	8.839 8042	8.841 6229	8.843 4339	5
56	8.834 3327	8.836 1744	8.838 0084	8.839 8346	8.841 6531	8.843 4641	4
57	8.834 3634	8.836 2051	8.838 0389	8.839 8650	8.841 6834	8.843 4942	3
58	8.834 3942	8.836 2357	8.838 0694	8.839 8954	8.841 7136	8.843 5243	2
59	8.834 4249	8.836 2663	8.838 0999	8.839 9257	8.841 7439	8.843 5544	1
60	8.834 4557	8.836 2969	8.838 1304	8.839 9561	8.841 7741	8.843 5845	0
″	5′	4′	3′	2′	1′	0′	″

cos 86°

tang 3°

″	54′	55′	56′	57′	58′	59′	″
0	8.833 6134	8.835 4712	8.837 3211	8.839 1633	8.840 9977	8.842 8245	60
1	8.833 6445	8.835 5021	8.837 3519	8.839 1939	8.841 0282	8.842 8549	59
2	8.833 6755	8.835 5330	8.837 3826	8.839 2245	8.841 0587	8.842 8853	58
3	8.833 7065	8.835 5639	8.837 4134	8.839 2552	8.841 0892	8.842 9156	57
4	8.833 7375	8.835 5948	8.837 4442	8.839 2858	8.841 1197	8.842 9460	56
5	8.833 7685	8.835 6257	8.837 4749	8.839 3164	8.841 1502	8.842 9764	55
6	8.833 7996	8.835 6565	8.837 5057	8.839 3471	8.841 1807	8.843 0068	54
7	8.833 8306	8.835 6874	8.837 5364	8.839 3777	8.841 2112	8.843 0371	53
8	8.833 8616	8.835 7183	8.837 5672	8.839 4083	8.841 2417	8.843 0675	52
9	8.833 8926	8.835 7492	8.837 5979	8.839 4389	8.841 2722	8.843 0979	51
10	8.833 9236	8.835 7801	8.837 6287	8.839 4695	8.841 3027	8.843 1282	50
11	8.833 9546	8.835 8109	8.837 6594	8.839 5002	8.841 3332	8.843 1586	49
12	8.833 9856	8.835 8418	8.837 6902	8.839 5308	8.841 3637	8.843 1890	48
13	8.834 0166	8.835 8727	8.837 7209	8.839 5614	8.841 3942	8.843 2193	47
14	8.834 0476	8.835 9035	8.837 7516	8.839 5920	8.841 4246	8.843 2497	46
15	8.834 0786	8.835 9344	8.837 7824	8.839 6226	8.841 4551	8.843 2800	45
16	8.834 1096	8.835 9653	8.837 8131	8.839 6532	8.841 4856	8.843 3104	44
17	8.834 1406	8.835 9961	8.837 8438	8.839 6838	8.841 5161	8.843 3407	43
18	8.834 1716	8.836 0270	8.837 8746	8.839 7144	8.841 5465	8.843 3711	42
19	8.834 2026	8.836 0578	8.837 9053	8.839 7450	8.841 5770	8.843 4014	41
20	8.834 2336	8.836 0887	8.837 9360	8.839 7756	8.841 6075	8.843 4318	40
21	8.834 2645	8.836 1196	8.837 9667	8.839 8062	8.841 6380	8.843 4621	39
22	8.834 2955	8.836 1504	8.837 9975	8.839 8368	8.841 6684	8.843 4924	38
23	8.834 3265	8.836 1813	8.838 0282	8.839 8674	8.841 6989	8.843 5228	37
24	8.834 3575	8.836 2121	8.838 0589	8.839 8980	8.841 7293	8.843 5531	36
25	8.834 3885	8.836 2429	8.838 0896	8.839 9285	8.841 7598	8.843 5834	35
26	8.834 4194	8.836 2738	8.838 1203	8.839 9591	8.841 7903	8.843 6138	34
27	8.834 4504	8.836 3046	8.838 1510	8.839 9897	8.841 8207	8.843 6441	33
28	8.834 4814	8.836 3355	8.838 1817	8.840 0203	8.841 8512	8.843 6744	32
29	8.834 5123	8.836 3663	8.838 2125	8.840 0509	8.841 8816	8.843 7047	31
30	8.834 5433	8.836 3971	8.838 2432	8.840 0814	8.841 9121	8.843 7351	30
31	8.834 5743	8.836 4280	8.838 2739	8.840 1120	8.841 9425	8.843 7654	29
32	8.834 6052	8.836 4588	8.838 3046	8.840 1426	8.841 9729	8.843 7957	28
33	8.834 6362	8.836 4896	8.838 3353	8.840 1732	8.842 0034	8.843 8260	27
34	8.834 6671	8.836 5204	8.838 3659	8.840 2037	8.842 0338	8.843 8563	26
35	8.834 6981	8.836 5513	8.838 3966	8.840 2343	8.842 0643	8.843 8866	25
36	8.834 7290	8.836 5821	8.838 4273	8.840 2649	8.842 0947	8.843 9169	24
37	8.834 7600	8.836 6129	8.838 4580	8.840 2954	8.842 1251	8.843 9473	23
38	8.834 7909	8.836 6437	8.838 4887	8.840 3260	8.842 1556	8.843 9776	22
39	8.834 8219	8.836 6745	8.838 5194	8.840 3565	8.842 1860	8.844 0079	21
40	8.834 8528	8.836 7053	8.838 5501	8.840 3871	8.842 2164	8.844 0382	20
41	8.834 8838	8.836 7361	8.838 5808	8.840 4176	8.842 2468	8.844 0685	19
42	8.834 9147	8.836 7670	8.838 6114	8.840 4482	8.842 2773	8.844 0988	18
43	8.834 9456	8.836 7978	8.838 6421	8.840 4787	8.842 3077	8.844 1290	17
44	8.834 9766	8.836 8286	8.838 6728	8.840 5093	8.842 3381	8.844 1593	16
45	8.835 0075	8.836 8594	8.838 7035	8.840 5398	8.842 3685	8.844 1896	15
46	8.835 0384	8.836 8902	8.838 7341	8.840 5704	8.842 3989	8.844 2199	14
47	8.835 0693	8.836 9210	8.838 7648	8.840 6009	8.842 4293	8.844 2502	13
48	8.835 1003	8.836 9518	8.838 7955	8.840 6314	8.842 4598	8.844 2805	12
49	8.835 1312	8.836 9825	8.838 8261	8.840 6620	8.842 4902	8.844 3108	11
50	8.835 1621	8.837 0133	8.838 8568	8.840 6925	8.842 5206	8.844 3410	10
51	8.835 1930	8.837 0441	8.838 8874	8.840 7230	8.842 5510	8.844 3713	9
52	8.835 2239	8.837 0749	8.838 9181	8.840 7536	8.842 5814	8.844 4016	8
53	8.835 2549	8.837 1057	8.838 9487	8.840 7841	8.842 6118	8.844 4319	7
54	8.835 2858	8.837 1365	8.838 9794	8.840 8146	8.842 6422	8.844 4621	6
55	8.835 3167	8.837 1673	8.839 0100	8.840 8451	8.842 6726	8.844 4924	5
56	8.835 3476	8.837 1980	8.839 0407	8.840 8756	8.842 7030	8.844 5227	4
57	8.835 3785	8.837 2288	8.839 0713	8.840 9062	8.842 7333	8.844 5529	3
58	8.835 4094	8.837 2596	8.839 1020	8.840 9367	8.842 7637	8.844 5832	2
59	8.835 4403	8.837 2903	8.839 1326	8.840 9672	8.842 7941	8.844 6135	1
60	8.835 4712	8.837 3211	8.839 1633	8.840 9977	8.842 8245	8.844 6437	0
″	5′	4′	3′	2′	1′	0′	″

cotg 86°

sin 4°

″	0′	1′	2′	3′	4′	5′	″
0	8.843 5845	8.845 3874	8.847 1827	8.848 9707	8.850 7512	8.852 5245	60
1	8.843 6146	8.845 4174	8.847 2126	8.849 0004	8.850 7809	8.852 5540	59
2	8.843 6447	8.845 4473	8.847 2425	8.849 0301	8.850 8105	8.852 5835	58
3	8.843 6748	8.845 4773	8.847 2723	8.849 0599	8.850 8401	8.852 6130	57
4	8.843 7049	8.845 5073	8.847 3022	8.849 0896	8.850 8697	8.852 6425	56
5	8.843 7350	8.845 5373	8.847 3320	8.849 1193	8.850 8993	8.852 6719	55
6	8.843 7651	8.845 5672	8.847 3619	8.849 1491	8.850 9289	8.852 7014	54
7	8.843 7952	8.845 5972	8.847 3917	8.849 1788	8.850 9585	8.852 7309	53
8	8.843 8253	8.845 6272	8.847 4216	8.849 2085	8.850 9881	8.852 7604	52
9	8.843 8554	8.845 6572	8.847 4514	8.849 2382	8.851 0177	8.852 7899	51
10	8.843 8855	8.845 6871	8.847 4812	8.849 2679	8.851 0473	8.852 8193	50
11	8.843 9156	8.845 7171	8.847 5111	8.849 2977	8.851 0769	8.852 8488	49
12	8.843 9457	8.845 7470	8.847 5409	8.849 3274	8.851 1065	8.852 8783	48
13	8.843 9758	8.845 7770	8.847 5708	8.849 3571	8.851 1361	8.852 9078	47
14	8.844 0059	8.845 8070	8.847 6006	8.849 3868	8.851 1657	8.852 9372	46
15	8.844 0359	8.845 8369	8.847 6304	8.849 4165	8.851 1952	8.852 9667	45
16	8.844 0660	8.845 8669	8.847 6602	8.849 4462	8.851 2248	8.852 9961	44
17	8.844 0961	8.845 8968	8.847 6901	8.849 4759	8.851 2544	8.853 0256	43
18	8.844 1262	8.845 9268	8.847 7199	8.849 5056	8.851 2840	8.853 0551	42
19	8.844 1562	8.845 9567	8.847 7497	8.849 5353	8.851 3136	8.853 0845	41
20	8.844 1863	8.845 9867	8.847 7795	8.849 5650	8.851 3431	8.853 1140	40
21	8.844 2164	8.846 0166	8.847 8094	8.849 5947	8.851 3727	8.853 1434	39
22	8.844 2464	8.846 0465	8.847 8392	8.849 6244	8.851 4023	8.853 1729	38
23	8.844 2765	8.846 0765	8.847 8690	8.849 6541	8.851 4319	8.853 2023	37
24	8.844 3066	8.846 1064	8.847 8988	8.849 6838	8.851 4614	8.853 2318	36
25	8.844 3366	8.846 1363	8.847 9286	8.849 7135	8.851 4910	8.853 2612	35
26	8.844 3667	8.846 1663	8.847 9584	8.849 7432	8.851 5205	8.853 2907	34
27	8.844 3967	8.846 1962	8.847 9882	8.849 7728	8.851 5501	8.853 3201	33
28	8.844 4268	8.846 2261	8.848 0180	8.849 8025	8.851 5797	8.853 3495	32
29	8.844 4568	8.846 2561	8.848 0478	8.849 8322	8.851 6092	8.853 3790	31
30	8.844 4869	8.846 2860	8.848 0776	8.849 8619	8.851 6388	8.853 4084	30
31	8.844 5169	8.846 3159	8.848 1074	8.849 8915	8.851 6683	8.853 4378	29
32	8.844 5470	8.846 3458	8.848 1372	8.849 9212	8.851 6979	8.853 4673	28
33	8.844 5770	8.846 3757	8.848 1670	8.849 9509	8.851 7274	8.853 4967	27
34	8.844 6071	8.846 4057	8.848 1968	8.849 9806	8.851 7570	8.853 5261	26
35	8.844 6371	8.846 4356	8.848 2266	8.850 0102	8.851 7865	8.853 5556	25
36	8.844 6671	8.846 4655	8.848 2564	8.850 0399	8.851 8161	8.853 5850	24
37	8.844 6972	8.846 4954	8.848 2862	8.850 0696	8.851 8456	8.853 6144	23
38	8.844 7272	8.846 5253	8.848 3160	8.850 0992	8.851 8752	8.853 6438	22
39	8.844 7572	8.846 5552	8.848 3457	8.850 1289	8.851 9047	8.853 6732	21
40	8.844 7873	8.846 5851	8.848 3755	8.850 1585	8.851 9342	8.853 7026	20
41	8.844 8173	8.846 6150	8.848 4053	8.850 1882	8.851 9638	8.853 7321	19
42	8.844 8473	8.846 6449	8.848 4351	8.850 2178	8.851 9933	8.853 7615	18
43	8.844 8773	8.846 6748	8.848 4648	8.850 2475	8.852 0228	8.853 7909	17
44	8.844 9073	8.846 7047	8.848 4946	8.850 2771	8.852 0523	8.853 8203	16
45	8.844 9374	8.846 7346	8.848 5244	8.850 3068	8.852 0819	8.853 8497	15
46	8.844 9674	8.846 7645	8.848 5541	8.850 3364	8.852 1114	8.853 8791	14
47	8.844 9974	8.846 7944	8.848 5839	8.850 3661	8.852 1409	8.853 9085	13
48	8.845 0274	8.846 8243	8.848 6137	8.850 3957	8.852 1704	8.853 9379	12
49	8.845 0574	8.846 8541	8.848 6434	8.850 4254	8.852 2000	8.853 9673	11
50	8.845 0874	8.846 8840	8.848 6732	8.850 4550	8.852 2295	8.853 9967	10
51	8.845 1174	8.846 9139	8.848 7030	8.850 4846	8.852 2590	8.854 0261	9
52	8.845 1474	8.846 9438	8.848 7327	8.850 5143	8.852 2885	8.854 0555	8
53	8.845 1774	8.846 9737	8.848 7625	8.850 5439	8.852 3180	8.854 0849	7
54	8.845 2074	8.847 0035	8.848 7922	8.850 5735	8.852 3475	8.854 1142	6
55	8.845 2374	8.847 0334	8.848 8220	8.850 6031	8.852 3770	8.854 1436	5
56	8.845 2674	8.847 0633	8.848 8517	8.850 6328	8.852 4065	8.854 1730	4
57	8.845 2974	8.847 0931	8.848 8815	8.850 6624	8.852 4360	8.854 2024	3
58	8.845 3274	8.847 1230	8.848 9112	8.850 6920	8.852 4655	8.854 2318	2
59	8.845 3574	8.847 1529	8.848 9409	8.850 7216	8.852 4950	8.854 2611	1
60	8.845 3874	8.847 1827	8.848 9707	8.850 7512	8.852 5245	8.854 2905	0
″	59′	58′	57′	56′	55′	54′	″

cos 85°

tang 4°

″	0′	1′	2′	3′	4′	5′	″
0	8.844 6437	8.846 4554	8.848 2597	8.850 0566	8.851 8461	8.853 6283	60
1	8.844 6740	8.846 4856	8.848 2897	8.850 0864	8.851 8758	8.853 6580	59
2	8.844 7042	8.846 5157	8.848 3197	8.850 1163	8.851 9056	8.853 6876	58
3	8.844 7345	8.846 5458	8.848 3497	8.850 1462	8.851 9354	8.853 7173	57
4	8.844 7647	8.846 5759	8.848 3797	8.850 1761	8.851 9651	8.853 7469	56
5	8.844 7950	8.846 6061	8.848 4097	8.850 2060	8.851 9949	8.853 7765	55
6	8.844 8252	8.846 6362	8.848 4397	8.850 2358	8.852 0246	8.853 8062	54
7	8.844 8555	8.846 6663	8.848 4697	8.850 2657	8.852 0544	8.853 8358	53
8	8.844 8857	8.846 6964	8.848 4997	8.850 2956	8.852 0841	8.853 8654	52
9	8.844 9160	8.846 7265	8.848 5297	8.850 3254	8.852 1139	8.853 8951	51
10	8.844 9462	8.846 7567	8.848 5597	8.850 3553	8.852 1436	8.853 9247	50
11	8.844 9764	8.846 7868	8.848 5897	8.850 3852	8.852 1734	8.853 9543	49
12	8.845 0067	8.846 8169	8.848 6197	8.850 4150	8.852 2031	8.853 9839	48
13	8.845 0369	8.846 8470	8.848 6496	8.850 4449	8.852 2329	8.854 0135	47
14	8.845 0671	8.846 8771	8.848 6796	8.850 4748	8.852 2626	8.854 0432	46
15	8.845 0974	8.846 9072	8.848 7096	8.850 5046	8.852 2923	8.854 0728	45
16	8.845 1276	8.846 9373	8.848 7396	8.850 5345	8.852 3221	8.854 1024	44
17	8.845 1578	8.846 9674	8.848 7695	8.850 5643	8.852 3518	8.854 1320	43
18	8.845 1880	8.846 9975	8.848 7995	8.850 5942	8.852 3815	8.854 1616	42
19	8.845 2182	8.847 0276	8.848 8295	8.850 6240	8.852 4112	8.854 1912	41
20	8.845 2485	8.847 0577	8.848 8595	8.850 6539	8.852 4410	8.854 2208	40
21	8.845 2787	8.847 0878	8.848 8894	8.850 6837	8.852 4707	8.854 2504	39
22	8.845 3089	8.847 1179	8.848 9194	8.850 7136	8.852 5004	8.854 2800	38
23	8.845 3391	8.847 1479	8.848 9494	8.850 7434	8.852 5301	8.854 3096	37
24	8.845 3693	8.847 1780	8.848 9793	8.850 7732	8.852 5599	8.854 3392	36
25	8.845 3995	8.847 2081	8.849 0093	8.850 8031	8.852 5896	8.854 3688	35
26	8.845 4297	8.847 2382	8.849 0392	8.850 8329	8.852 6193	8.854 3984	34
27	8.845 4599	8.847 2683	8.849 0692	8.850 8627	8.852 6490	8.854 4280	33
28	8.845 4901	8.847 2983	8.849 0991	8.850 8926	8.852 6787	8.854 4576	32
29	8.845 5203	8.847 3284	8.849 1291	8.850 9224	8.852 7084	8.854 4872	31
30	8.845 5505	8.847 3585	8.849 1590	8.850 9522	8.852 7381	8.854 5168	30
31	8.845 5807	8.847 3886	8.849 1890	8.850 9821	8.852 7678	8.854 5464	29
32	8.845 6109	8.847 4186	8.849 2189	8.851 0119	8.852 7975	8.854 5759	28
33	8.845 6411	8.847 4487	8.849 2489	8.851 0417	8.852 8272	8.854 6055	27
34	8.845 6713	8.847 4788	8.849 2788	8.851 0715	8.852 8569	8.854 6351	26
35	8.845 7015	8.847 5088	8.849 3088	8.851 1013	8.852 8866	8.854 6647	25
36	8.845 7317	8.847 5389	8.849 3387	8.851 1311	8.852 9163	8.854 6942	24
37	8.845 7618	8.847 5689	8.849 3686	8.851 1610	8.852 9460	8.854 7238	23
38	8.845 7920	8.847 5990	8.849 3986	8.851 1908	8.852 9757	8.854 7534	22
39	8.845 8222	8.847 6290	8.849 4285	8.851 2206	8.853 0054	8.854 7829	21
40	8.845 8524	8.847 6591	8.849 4584	8.851 2504	8.853 0351	8.854 8125	20
41	8.845 8825	8.847 6891	8.849 4883	8.851 2802	8.853 0647	8.854 8421	19
42	8.845 9127	8.847 7192	8.849 5183	8.851 3100	8.853 0944	8.854 8716	18
43	8.845 9429	8.847 7492	8.849 5482	8.851 3398	8.853 1241	8.854 9012	17
44	8.845 9730	8.847 7793	8.849 5781	8.851 3696	8.853 1538	8.854 9308	16
45	8.846 0032	8.847 8093	8.849 6080	8.851 3994	8.853 1835	8.854 9603	15
46	8.846 0334	8.847 8394	8.849 6379	8.851 4292	8.853 2131	8.854 9899	14
47	8.846 0635	8.847 8694	8.849 6679	8.851 4590	8.853 2428	8.855 0194	13
48	8.846 0937	8.847 8994	8.849 6978	8.851 4888	8.853 2725	8.855 0490	12
49	8.846 1238	8.847 9295	8.849 7277	8.851 5185	8.853 3021	8.855 0785	11
50	8.846 1540	8.847 9595	8.849 7576	8.851 5483	8.853 3318	8.855 1081	10
51	8.846 1842	8.847 9895	8.849 7875	8.851 5781	8.853 3615	8.855 1376	9
52	8.846 2143	8.848 0195	8.849 8174	8.851 6079	8.853 3911	8.855 1671	8
53	8.846 2445	8.848 0496	8.849 8473	8.851 6377	8.853 4208	8.855 1967	7
54	8.846 2746	8.848 0796	8.849 8772	8.851 6675	8.853 4504	8.855 2262	6
55	8.846 3047	8.848 1096	8.849 9071	8.851 6972	8.853 4801	8.855 2557	5
56	8.846 3349	8.848 1396	8.849 9370	8.851 7270	8.853 5098	8.855 2853	4
57	8.846 3650	8.848 1697	8.849 9669	8.851 7568	8.853 5394	8.855 3148	3
58	8.846 3952	8.848 1997	8.849 9968	8.851 7865	8.853 5691	8.855 3443	2
59	8.846 4253	8.848 2297	8.850 0267	8.851 8163	8.853 5987	8.855 3739	1
60	8.846 4554	8.848 2597	8.850 0566	8.851 8461	8.853 6283	8.855 4034	0
″	59′	58′	57′	56′	55′	54′	″

cotg 85°

sin 4°

″	6′	7′	8′	9′	10′	11′	″
0	8.854 2905	8.856 0493	8.857 8010	8.859 5457	8.861 2833	8.863 0139	60
1	8.854 3199	8.856 0786	8.857 8302	8.859 5747	8.861 3122	8.863 0427	59
2	8.854 3493	8.856 1078	8.857 8593	8.859 6037	8.861 3411	8.863 0715	58
3	8.854 3786	8.856 1371	8.857 8884	8.859 6327	8.861 3700	8.863 1003	57
4	8.854 4080	8.856 1663	8.857 9176	8.859 6617	8.861 3989	8.863 1290	56
5	8.854 4374	8.856 1956	8.857 9467	8.859 6907	8.861 4277	8.863 1578	55
6	8.854 4667	8.856 2248	8.857 9758	8.859 7197	8.861 4566	8.863 1866	54
7	8.854 4961	8.856 2541	8.858 0049	8.859 7487	8.861 4855	8.863 2154	53
8	8.854 5254	8.856 2833	8.858 0341	8.859 7777	8.861 5144	8.863 2441	52
9	8.854 5548	8.856 3126	8.858 0632	8.859 8067	8.861 5433	8.863 2729	51
10	8.854 5842	8.856 3418	8.858 0923	8.859 8357	8.861 5722	8.863 3017	50
11	8.854 6135	8.856 3710	8.858 1214	8.859 8647	8.861 6011	8.863 3304	49
12	8.854 6429	8.856 4003	8.858 1505	8.859 8937	8.861 6299	8.863 3592	48
13	8.854 6722	8.856 4295	8.858 1796	8.859 9227	8.861 6588	8.863 3880	47
14	8.854 7016	8.856 4587	8.858 2087	8.859 9517	8.861 6877	8.863 4167	46
15	8.854 7309	8.856 4879	8.858 2379	8.859 9807	8.861 7166	8.863 4455	45
16	8.854 7602	8.856 5172	8.858 2670	8.860 0097	8.861 7454	8.863 4742	44
17	8.854 7896	8.856 5464	8.858 2961	8.860 0387	8.861 7743	8.863 5030	43
18	8.854 8189	8.856 5756	8.858 3252	8.860 0677	8.861 8032	8.863 5318	42
19	8.854 8483	8.856 6048	8.858 3543	8.860 0967	8.861 8321	8.863 5605	41
20	8.854 8776	8.856 6340	8.858 3834	8.860 1256	8.861 8609	8.863 5893	40
21	8.854 9069	8.856 6632	8.858 4125	8.860 1546	8.861 8898	8.863 6180	39
22	8.854 9363	8.856 6925	8.858 4416	8.860 1836	8.861 9186	8.863 6467	38
23	8.854 9656	8.856 7217	8.858 4706	8.860 2126	8.861 9475	8.863 6755	37
24	8.854 9949	8.856 7509	8.858 4997	8.860 2415	8.861 9764	8.863 7042	36
25	8.855 0242	8.856 7801	8.858 5288	8.860 2705	8.862 0052	8.863 7330	35
26	8.855 0536	8.856 8093	8.858 5579	8.860 2995	8.862 0341	8.863 7617	34
27	8.855 0829	8.856 8385	8.858 5870	8.860 3284	8.862 0629	8.863 7904	33
28	8.855 1122	8.856 8677	8.858 6161	8.860 3574	8.862 0918	8.863 8192	32
29	8.855 1415	8.856 8969	8.858 6452	8.860 3864	8.862 1206	8.863 8479	31
30	8.855 1708	8.856 9261	8.858 6742	8.860 4153	8.862 1495	8.863 8766	30
31	8.855 2001	8.856 9553	8.858 7033	8.860 4443	8.862 1783	8.863 9054	29
32	8.855 2294	8.856 9845	8.858 7324	8.860 4733	8.862 2071	8.863 9341	28
33	8.855 2588	8.857 0137	8.858 7615	8.860 5022	8.862 2360	8.863 9628	27
34	8.855 2881	8.857 0428	8.858 7905	8.860 5312	8.862 2648	8.863 9915	26
35	8.855 3174	8.857 0720	8.858 8196	8.860 5601	8.862 2936	8.864 0203	25
36	8.855 3467	8.857 1012	8.858 8487	8.860 5891	8.862 3225	8.864 0490	24
37	8.855 3760	8.857 1304	8.858 8777	8.860 6180	8.862 3513	8.864 0777	23
38	8.855 4053	8.857 1596	8.858 9068	8.860 6470	8.862 3801	8.864 1064	22
39	8.855 4346	8.857 1888	8.858 9358	8.860 6759	8.862 4090	8.864 1351	21
40	8.855 4639	8.857 2179	8.858 9649	8.860 7048	8.862 4378	8.864 1638	20
41	8.855 4932	8.857 2471	8.858 9940	8.860 7338	8.862 4666	8.864 1925	19
42	8.855 5224	8.857 2763	8.859 0230	8.860 7627	8.862 4954	8.864 2212	18
43	8.855 5517	8.857 3054	8.859 0521	8.860 7917	8.862 5243	8.864 2500	17
44	8.855 5810	8.857 3346	8.859 0811	8.860 8206	8.862 5531	8.864 2787	16
45	8.855 6103	8.857 3638	8.859 1102	8.860 8495	8.862 5819	8.864 3074	15
46	8.855 6396	8.857 3929	8.859 1392	8.860 8784	8.862 6107	8.864 3361	14
47	8.855 6689	8.857 4221	8.859 1683	8.860 9074	8.862 6395	8.864 3648	13
48	8.855 6982	8.857 4513	8.859 1973	8.860 9363	8.862 6683	8.864 3934	12
49	8.855 7274	8.857 4804	8.859 2263	8.860 9652	8.862 6971	8.864 4221	11
50	8.855 7567	8.857 5096	8.859 2554	8.860 9941	8.862 7259	8.864 4508	10
51	8.855 7860	8.857 5387	8.859 2844	8.861 0231	8.862 7548	8.864 4795	9
52	8.855 8152	8.857 5679	8.859 3135	8.861 0520	8.862 7836	8.864 5082	8
53	8.855 8445	8.857 5970	8.859 3425	8.861 0809	8.862 8124	8.864 5369	7
54	8.855 8738	8.857 6262	8.859 3715	8.861 1098	8.862 8412	8.864 5656	6
55	8.855 9030	8.857 6553	8.859 4005	8.861 1387	8.862 8700	8.864 5943	5
56	8.855 9323	8.857 6845	8.859 4296	8.861 1676	8.862 8987	8.864 6229	4
57	8.855 9616	8.857 7136	8.859 4586	8.861 1965	8.862 9275	8.864 6516	3
58	8.855 9908	8.857 7428	8.859 4876	8.861 2255	8.862 9563	8.864 6803	2
59	8.856 0201	8.857 7719	8.859 5166	8.861 2544	8.862 9851	8.864 7090	1
60	8.856 0493	8.857 8010	8.859 5457	8.861 2833	8.863 0139	8.864 7376	0
″	53′	52′	51′	50′	49′	48′	″

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″	6′	7′	8′	9′	10′	11′	″
0	8.855 4034	8.857 1713	8.858 9321	8.860 6859	8.862 4327	8.864 1725	60
1	8.855 4329	8.857 2007	8.858 9614	8.860 7150	8.862 4617	8.864 2015	59
2	8.855 4624	8.857 2301	8.858 9907	8.860 7442	8.862 4908	8.864 2304	58
3	8.855 4920	8.857 2595	8.859 0200	8.860 7734	8.862 5198	8.864 2593	57
4	8.855 5215	8.857 2889	8.859 0492	8.860 8025	8.862 5489	8.864 2883	56
5	8.855 5510	8.857 3183	8.859 0785	8.860 8317	8.862 5779	8.864 3172	55
6	8.855 5805	8.857 3477	8.859 1078	8.860 8609	8.862 6070	8.864 3461	54
7	8.855 6100	8.857 3771	8.859 1371	8.860 8900	8.862 6360	8.864 3751	53
8	8.855 6395	8.857 4065	8.859 1663	8.860 9192	8.862 6650	8.864 4040	52
9	8.855 6690	8.857 4359	8.859 1956	8.860 9483	8.862 6941	8.864 4329	51
10	8.855 6985	8.857 4653	8.859 2249	8.860 9775	8.862 7231	8.864 4618	50
11	8.855 7280	8.857 4946	8.859 2542	8.861 0066	8.862 7522	8.864 4908	49
12	8.855 7575	8.857 5240	8.859 2834	8.861 0358	8.862 7812	8.864 5197	48
13	8.855 7870	8.857 5534	8.859 3127	8.861 0649	8.862 8102	8.864 5486	47
14	8.855 8165	8.857 5828	8.859 3419	8.861 0941	8.862 8392	8.864 5775	46
15	8.855 8460	8.857 6122	8.859 3712	8.861 1232	8.862 8683	8.864 6064	45
16	8.855 8755	8.857 6415	8.859 4005	8.861 1524	8.862 8973	8.864 6353	44
17	8.855 9050	8.857 6709	8.859 4297	8.861 1815	8.862 9263	8.864 6642	43
18	8.855 9345	8.857 7003	8.859 4590	8.861 2106	8.862 9553	8.864 6931	42
19	8.855 9640	8.857 7296	8.859 4882	8.861 2398	8.862 9844	8.864 7220	41
20	8.855 9935	8.857 7590	8.859 5175	8.861 2689	8.863 0134	8.864 7510	40
21	8.856 0230	8.857 7884	8.859 5467	8.861 2980	8.863 0424	8.864 7799	39
22	8.856 0525	8.857 8177	8.859 5760	8.861 3272	8.863 0714	8.864 8088	38
23	8.856 0819	8.857 8471	8.859 6052	8.861 3563	8.863 1004	8.864 8376	37
24	8.856 1114	8.857 8765	8.859 6345	8.861 3854	8.863 1294	8.864 8665	36
25	8.856 1409	8.857 9058	8.859 6637	8.861 4145	8.863 1584	8.864 8954	35
26	8.856 1704	8.857 9352	8.859 6929	8.861 4437	8.863 1874	8.864 9243	34
27	8.856 1998	8.857 9645	8.859 7222	8.861 4728	8.863 2165	8.864 9532	33
28	8.856 2293	8.857 9939	8.859 7514	8.861 5019	8.863 2455	8.864 9821	32
29	8.856 2588	8.858 0232	8.859 7806	8.861 5310	8.863 2745	8.865 0110	31
30	8.856 2882	8.858 0526	8.859 8099	8.861 5601	8.863 3035	8.865 0399	30
31	8.856 3177	8.858 0819	8.859 8391	8.861 5892	8.863 3325	8.865 0688	29
32	8.856 3472	8.858 1113	8.859 8683	8.861 6184	8.863 3614	8.865 0976	28
33	8.856 3766	8.858 1406	8.859 8975	8.861 6475	8.863 3904	8.865 1265	27
34	8.856 4061	8.858 1700	8.859 9268	8.861 6766	8.863 4194	8.865 1554	26
35	8.856 4355	8.858 1993	8.859 9560	8.861 7057	8.863 4484	8.865 1843	25
36	8.856 4650	8.858 2286	8.859 9852	8.861 7348	8.863 4774	8.865 2131	24
37	8.856 4944	8.858 2580	8.860 0144	8.861 7639	8.863 5064	8.865 2420	23
38	8.856 5239	8.858 2873	8.860 0436	8.861 7930	8.863 5354	8.865 2709	22
39	8.856 5533	8.858 3166	8.860 0728	8.861 8221	8.863 5644	8.865 2998	21
40	8.856 5828	8.858 3460	8.860 1021	8.861 8512	8.863 5933	8.865 3286	20
41	8.856 6122	8.858 3753	8.860 1313	8.861 8803	8.863 6223	8.865 3575	19
42	8.856 6417	8.858 4046	8.860 1605	8.861 9094	8.863 6513	8.865 3863	18
43	8.856 6711	8.858 4339	8.860 1897	8.861 9384	8.863 6803	8.865 4152	17
44	8.856 7006	8.858 4632	8.860 2189	8.861 9675	8.863 7092	8.865 4441	16
45	8.856 7300	8.858 4926	8.860 2481	8.861 9966	8.863 7382	8.865 4729	15
46	8.856 7594	8.858 5219	8.860 2773	8.862 0257	8.863 7672	8.865 5018	14
47	8.856 7889	8.858 5512	8.860 3065	8.862 0548	8.863 7961	8.865 5306	13
48	8.856 8183	8.858 5805	8.860 3357	8.862 0839	8.863 8251	8.865 5595	12
49	8.856 8477	8.858 6098	8.860 3649	8.862 1129	8.863 8541	8.865 5883	11
50	8.856 8771	8.858 6391	8.860 3941	8.862 1420	8.863 8830	8.865 6172	10
51	8.856 9066	8.858 6684	8.860 4233	8.862 1711	8.863 9120	8.865 6460	9
52	8.856 9360	8.858 6977	8.860 4524	8.862 2002	8.863 9409	8.865 6749	8
53	8.856 9654	8.858 7270	8.860 4816	8.862 2292	8.863 9699	8.865 7037	7
54	8.856 9948	8.858 7563	8.860 5108	8.862 2583	8.863 9988	8.865 7325	6
55	8.857 0242	8.858 7856	8.860 5400	8.862 2874	8.864 0278	8.865 7614	5
56	8.857 0537	8.858 8149	8.860 5692	8.862 3164	8.864 0567	8.865 7902	4
57	8.857 0831	8.858 8442	8.860 5983	8.862 3455	8.864 0857	8.865 8190	3
58	8.857 1125	8.858 8735	8.860 6275	8.862 3745	8.864 1146	8.865 8479	2
59	8.857 1419	8.858 9028	8.860 6567	8.862 4036	8.864 1436	8.865 8767	1
60	8.857 1713	8.858 9321	8.860 6859	8.862 4327	8.864 1725	8.865 9055	0
″	53′	52′	51′	50′	49′	48′	″

″	12′	13′	14′	15′	16′	17′	″
0	8.864 7376	8.866 4545	8.868 1646	8.869 8680	8.871 5646	8.873 2546	60
1	8.864 7663	8.866 4831	8.868 1931	8.869 8963	8.871 5928	8.873 2827	59
2	8.864 7950	8.866 5116	8.868 2215	8.869 9246	8.871 6211	8.873 3109	58
3	8.864 8237	8.866 5402	8.868 2499	8.869 9530	8.871 6493	8.873 3390	57
4	8.864 8523	8.866 5687	8.868 2784	8.869 9813	8.871 6775	8.873 3671	56
5	8.864 8810	8.866 5973	8.868 3068	8.870 0096	8.871 7057	8.873 3952	55
6	8.864 9096	8.866 6258	8.868 3353	8.870 0379	8.871 7339	8.873 4233	54
7	8.864 9383	8.866 6544	8.868 3637	8.870 0663	8.871 7621	8.873 4514	53
8	8.864 9670	8.866 6829	8.868 3921	8.870 0946	8.871 7903	8.873 4795	52
9	8.864 9956	8.866 7115	8.868 4206	8.870 1229	8.871 8185	8.873 5076	51
10	8.865 0243	8.866 7400	8.868 4490	8.870 1512	8.871 8467	8.873 5357	50
11	8.865 0529	8.866 7686	8.868 4774	8.870 1795	8.871 8750	8.873 5638	49
12	8.865 0816	8.866 7971	8.868 5058	8.870 2078	8.871 9032	8.873 5918	48
13	8.865 1102	8.866 8256	8.868 5342	8.870 2361	8.871 9314	8.873 6199	47
14	8.865 1389	8.866 8542	8.868 5627	8.870 2644	8.871 9595	8.873 6480	46
15	8.865 1675	8.866 8827	8.868 5911	8.870 2928	8.871 9877	8.873 6761	45
16	8.865 1961	8.866 9112	8.868 6195	8.870 3211	8.872 0159	8.873 7042	44
17	8.865 2248	8.866 9397	8.868 6479	8.870 3494	8.872 0441	8.873 7323	43
18	8.865 2534	8.866 9683	8.868 6763	8.870 3777	8.872 0723	8.873 7604	42
19	8.865 2821	8.866 9968	8.868 7047	8.870 4060	8.872 1005	8.873 7884	41
20	8.865 3107	8.867 0253	8.868 7331	8.870 4343	8.872 1287	8.873 8165	40
21	8.865 3393	8.867 0538	8.868 7616	8.870 4626	8.872 1569	8.873 8446	39
22	8.865 3680	8.867 0824	8.868 7900	8.870 4908	8.872 1851	8.873 8727	38
23	8.865 3966	8.867 1109	8.868 8184	8.870 5191	8.872 2132	8.873 9007	37
24	8.865 4252	8.867 1394	8.868 8468	8.870 5474	8.872 2414	8.873 9288	36
25	8.865 4538	8.867 1679	8.868 8752	8.870 5757	8.872 2696	8.873 9569	35
26	8.865 4825	8.867 1964	8.868 9036	8.870 6040	8.872 2978	8.873 9849	34
27	8.865 5111	8.867 2249	8.868 9320	8.870 6323	8.872 3259	8.874 0130	33
28	8.865 5397	8.867 2534	8.868 9604	8.870 6606	8.872 3541	8.874 0411	32
29	8.865 5683	8.867 2819	8.868 9887	8.870 6888	8.872 3823	8.874 0691	31
30	8.865 5969	8.867 3104	8.869 0171	8.870 7171	8.872 4105	8.874 0972	30
31	8.865 6256	8.867 3389	8.869 0455	8.870 7454	8.872 4386	8.874 1252	29
32	8.865 6542	8.867 3674	8.869 0739	8.870 7737	8.872 4668	8.874 1533	28
33	8.865 6828	8.867 3959	8.869 1023	8.870 8019	8.872 4949	8.874 1813	27
34	8.865 7114	8.867 4244	8.869 1307	8.870 8302	8.872 5231	8.874 2094	26
35	8.865 7400	8.867 4529	8.869 1591	8.870 8585	8.872 5513	8.874 2374	25
36	8.865 7686	8.867 4814	8.869 1874	8.870 8868	8.872 5794	8.874 2655	24
37	8.865 7972	8.867 5099	8.869 2158	8.870 9150	8.872 6076	8.874 2935	23
38	8.865 8258	8.867 5384	8.869 2442	8.870 9433	8.872 6357	8.874 3216	22
39	8.865 8544	8.867 5669	8.869 2726	8.870 9715	8.872 6639	8.874 3496	21
40	8.865 8830	8.867 5953	8.869 3009	8.870 9998	8.872 6920	8.874 3776	20
41	8.865 9116	8.867 6238	8.869 3293	8.871 0281	8.872 7202	8.874 4057	19
42	8.865 9402	8.867 6523	8.869 3577	8.871 0563	8.872 7483	8.874 4337	18
43	8.865 9688	8.867 6808	8.869 3860	8.871 0846	8.872 7765	8.874 4618	17
44	8.865 9974	8.867 7093	8.869 4144	8.871 1128	8.872 8046	8.874 4898	16
45	8.866 0259	8.867 7377	8.869 4428	8.871 1411	8.872 8328	8.874 5178	15
46	8.866 0545	8.867 7662	8.869 4711	8.871 1693	8.872 8609	8.874 5458	14
47	8.866 0831	8.867 7947	8.869 4995	8.871 1976	8.872 8890	8.874 5739	13
48	8.866 1117	8.867 8231	8.869 5278	8.871 2258	8.872 9172	8.874 6019	12
49	8.866 1403	8.867 8516	8.869 5562	8.871 2541	8.872 9453	8.874 6299	11
50	8.866 1689	8.867 8801	8.869 5845	8.871 2823	8.872 9734	8.874 6579	10
51	8.866 1974	8.867 9085	8.869 6129	8.871 3105	8.873 0016	8.874 6860	9
52	8.866 2260	8.867 9370	8.869 6412	8.871 3388	8.873 0297	8.874 7140	8
53	8.866 2546	8.867 9655	8.869 6696	8.871 3670	8.873 0578	8.874 7420	7
54	8.866 2831	8.867 9939	8.869 6979	8.871 3953	8.873 0859	8.874 7700	6
55	8.866 3117	8.868 0224	8.869 7263	8.871 4235	8.873 1141	8.874 7980	5
56	8.866 3403	8.868 0508	8.869 7546	8.871 4517	8.873 1422	8.874 8260	4
57	8.866 3688	8.868 0793	8.869 7830	8.871 4799	8.873 1703	8.874 8540	3
58	8.866 3974	8.868 1077	8.869 8113	8.871 5082	8.873 1984	8.874 8821	2
59	8.866 4260	8.868 1362	8.869 8396	8.871 5364	8.873 2265	8.874 9101	1
60	8.866 4545	8.868 1646	8.869 8680	8.871 5646	8.873 2546	8.874 9381	0
″	47′	46′	45′	44′	43′	42′	″

″	12′	13′	14′	15′	16′	17′	″
0	8.865 9055	8.867 6317	8.869 3511	8.871 0638	8.872 7699	8.874 4694	60
1	8.865 9343	8.867 6604	8.869 3797	8.871 0923	8.872 7983	8.874 4976	59
2	8.865 9632	8.867 6891	8.869 4083	8.871 1208	8.872 8267	8.874 5259	58
3	8.865 9920	8.867 7178	8.869 4369	8.871 1493	8.872 8550	8.874 5542	57
4	8.866 0208	8.867 7465	8.869 4655	8.871 1778	8.872 8834	8.874 5824	56
5	8.866 0496	8.867 7752	8.869 4941	8.871 2063	8.872 9118	8.874 6107	55
6	8.866 0784	8.867 8039	8.869 5227	8.871 2347	8.872 9401	8.874 6389	54
7	8.866 1073	8.867 8326	8.869 5513	8.871 2632	8.872 9685	8.874 6672	53
8	8.866 1361	8.867 8613	8.869 5799	8.871 2917	8.872 9969	8.874 6955	52
9	8.866 1649	8.867 8900	8.869 6085	8.871 3202	8.873 0252	8.874 7237	51
10	8.866 1937	8.867 9187	8.869 6370	8.871 3486	8.873 0536	8.874 7520	50
11	8.866 2225	8.867 9474	8.869 6656	8.871 3771	8.873 0820	8.874 7802	49
12	8.866 2513	8.867 9761	8.869 6942	8.871 4056	8.873 1103	8.874 8085	48
13	8.866 2801	8.868 0048	8.869 7228	8.871 4340	8.873 1387	8.874 8367	47
14	8.866 3089	8.868 0335	8.869 7514	8.871 4625	8.873 1670	8.874 8650	46
15	8.866 3377	8.868 0622	8.869 7799	8.871 4910	8.873 1954	8.874 8932	45
16	8.866 3665	8.868 0909	8.869 8085	8.871 5194	8.873 2237	8.874 9214	44
17	8.866 3953	8.868 1196	8.869 8371	8.871 5479	8.873 2521	8.874 9497	43
18	8.866 4241	8.868 1482	8.869 8656	8.871 5764	8.873 2804	8.874 9779	42
19	8.866 4529	8.868 1769	8.869 8942	8.871 6048	8.873 3088	8.875 0062	41
20	8.866 4817	8.868 2056	8.869 9228	8.871 6333	8 873 3371	8.875 0344	40
21	8.866 5105	8.868 2343	8.869 9513	8.871 6617	8 873 3655	8.875 0626	39
22	8.866 5392	8.868 2629	8.869 9799	8.871 6902	8 873 3938	8.875 0908	38
23	8.866 5680	8.868 2916	8.870 0085	8.871 7186	8.873 4221	8.875 1191	37
24	8.866 5968	8.868 3203	8.870 0370	8.871 7471	8.873 4505	8.875 1473	36
25	8.866 6256	8.868 3489	8.870 0656	8.871 7755	8.873 4788	8.875 1755	35
26	8.866 6544	8.868 3776	8.870 0941	8.871 8039	8.873 5071	8.875 2038	34
27	8.866 6831	8.868 4063	8.870 1227	8.871 8324	8.873 5355	8.875 2320	33
28	8.866 7119	8.868 4349	8.870 1512	8.871 8608	8.873 5638	8.875 2602	32
29	8.866 7407	8.868 4636	8.870 1798	8.871 8893	8.873 5921	8.875 2884	31
30	8.866 7695	8.868 4923	8.870 2083	8.871 9177	8.873 6205	8.875 3166	30
31	8.866 7982	8.868 5209	8.870 2369	8.871 9461	8.873 6488	8.875 3448	29
32	8.866 8270	8.868 5496	8.870 2654	8.871 9746	8.873 6771	8.875 3731	28
33	8.866 8558	8.868 5782	8.870 2939	8.872 0030	8.873 7054	8.875 4013	27
34	8.866 8845	8.868 6069	8.870 3225	8.872 0314	8.873 7337	8.875 4295	26
35	8.866 9133	8.868 6355	8.870 3510	8.872 0598	8.873 7621	8.875 4577	25
36	8.866 9420	8.868 6642	8.870 3796	8.872 0883	8.873 7904	8.875 4859	24
37	8.866 9708	8.868 6928	8.870 4081	8.872 1167	8.873 8187	8.875 5141	23
38	8.866 9996	8.868 7215	8.870 4366	8.872 1451	8.873 8470	8.875 5423	22
39	8.867 0283	8.868 7501	8.870 4651	8.872 1735	8.873 8753	8.875 5705	21
40	8.867 0571	8.868 7787	8.870 4937	8.872 2019	8.873 9036	8.875 5987	20
41	8.867 0858	8.868 8074	8.870 5222	8.872 2304	8.873 9319	8.875 6269	19
42	8.867 1146	8.868 8360	8.870 5507	8.872 2588	8.873 9602	8.875 6551	18
43	8.867 1433	8.868 8646	8.870 5792	8.872 2872	8.873 9885	8.875 6833	17
44	8.867 1721	8.868 8933	8.870 6078	8.872 3156	8.874 0168	8.875 7115	16
45	8.867 2008	8.868 9219	8.870 6363	8.872 3440	8.874 0451	8.875 7397	15
46	8.867 2295	8.868 9505	8.870 6648	8.872 3724	8.874 0734	8.875 7678	14
47	8.867 2583	8.868 9792	8.870 6933	8.872 4008	8.874 1017	8.875 7960	13
48	8.867 2870	8.869 0078	8.870 7218	8.872 4292	8.874 1300	8.875 8242	12
49	8.867 3157	8.869 0364	8.870 7503	8.872 4576	8.874 1583	8.875 8524	11
50	8.867 3445	8.869 0650	8.870 7789	8.872 4860	8.874 1866	8.875 8806	10
51	8.867 3732	8.869 0936	8.870 8074	8.872 5144	8.874 2149	8.875 9087	9
52	8.867 4019	8.869 1223	8.870 8359	8.872 5428	8.874 2431	8.875 9369	8
53	8.867 4307	8.869 1509	8.870 8644	8.872 5712	8.874 2714	8.875 9651	7
54	8.867 4594	8.869 1795	8.870 8929	8.872 5996	8.874 2997	8.875 9933	6
55	8.867 4881	8.869 2081	8.870 9214	8.872 6280	8.874 3280	8.876 0214	5
56	8.867 5168	8.869 2367	8.870 9499	8.872 6564	8.874 3563	8.876 0496	4
57	8.867 5456	8.869 2653	8.870 9784	8.872 6848	8.874 3845	8.876 0778	3
58	8.867 5743	8.869 2939	8.871 0069	8.872 7131	8.874 4128	8.876 1059	2
59	8.867 6030	8.869 3225	8.871 0353	8.872 7415	8.874 4411	8.876 1341	1
60	8.867 6317	8.869 3511	8.871 0638	8.872 7699	8.874 4694	8.876 1623	0
″	47′	46′	45′	44′	43′	42′	″

sin 4°

″	18′	19′	20′	21′	22′	23′	″
0	8.874 9381	8.876 6150	8.878 2854	8.879 9493	8.881 6069	8.883 2581	60
1	8.874 9661	8.876 6428	8.878 3131	8.879 9770	8.881 6345	8.883 2856	59
2	8.874 9941	8.876 6707	8.878 3409	8.880 0047	8.881 6620	8.883 3131	58
3	8.875 0221	8.876 6986	8.878 3687	8.880 0324	8.881 6896	8.883 3405	57
4	8.875 0501	8.876 7265	8.878 3965	8.880 0600	8.881 7172	8.883 3680	56
5	8.875 0781	8.876 7544	8.878 4243	8.880 0877	8.881 7447	8.883 3955	55
6	8.875 1060	8.876 7823	8.878 4520	8.880 1154	8.881 7723	8.883 4229	54
7	8.875 1340	8.876 8102	8.878 4798	8.880 1430	8.881 7999	8.883 4504	53
8	8.875 1620	8.876 8380	8.878 5076	8.880 1707	8.881 8274	8.883 4778	52
9	8.875 1900	8.876 8659	8.878 5354	8.880 1984	8.881 8550	8.883 5053	51
10	8.875 2180	8.876 8938	8.878 5631	8.880 2260	8.881 8825	8.883 5327	50
11	8.875 2460	8.876 9217	8.878 5909	8.880 2537	8.881 9101	8.883 5602	49
12	8.875 2740	8.876 9496	8.878 6187	8.880 2813	8.881 9377	8.883 5876	48
13	8.875 3019	8.876 9774	8.878 6464	8.880 3090	8.881 9652	8.883 6151	47
14	8.875 3299	8.877 0053	8.878 6742	8.880 3367	8.881 9928	8.883 6425	46
15	8.875 3579	8.877 0332	8.878 7019	8.880 3643	8.882 0203	8.883 6700	45
16	8.875 3859	8.877 0610	8.878 7297	8.880 3920	8.882 0479	8.883 6974	44
17	8.875 4138	8.877 0889	8.878 7575	8.880 4196	8.882 0754	8.883 7248	43
18	8.875 4418	8.877 1168	8.878 7852	8.880 4473	8.882 1029	8.883 7523	42
19	8.875 4698	8.877 1446	8.878 8130	8.880 4749	8.882 1305	8.883 7797	41
20	8.875 4977	8.877 1725	8.878 8407	8.880 5026	8.882 1580	8.883 8072	40
21	8.875 5257	8.877 2003	8.878 8685	8.880 5302	8.882 1856	8.883 8346	39
22	8.875 5537	8.877 2282	8.878 8962	8.880 5578	8.882 2131	8.883 8620	38
23	8.875 5816	8.877 2560	8.878 9240	8.880 5855	8.882 2406	8.883 8894	37
24	8.875 6096	8.877 2839	8.878 9517	8.880 6131	8.882 2682	8.883 9169	36
25	8.875 6376	8.877 3117	8.878 9795	8.880 6408	8.882 2957	8.883 9443	35
26	8.875 6655	8.877 3396	8.879 0072	8.880 6684	8.882 3232	8.883 9717	34
27	8.875 6935	8.877 3674	8.879 0349	8.880 6960	8.882 3507	8.883 9991	33
28	8.875 7214	8.877 3953	8.879 0627	8.880 7237	8.882 3783	8.884 0266	32
29	8.875 7494	8.877 4231	8.879 0904	8.880 7513	8.882 4058	8.884 0540	31
30	8.875 7773	8.877 4510	8.879 1181	8.880 7789	8.882 4333	8.884 0814	30
31	8.875 8053	8.877 4788	8.879 1459	8.880 8065	8.882 4608	8.884 1088	29
32	8.875 8332	8.877 5066	8.879 1736	8.880 8342	8.882 4884	8.884 1362	28
33	8.875 8612	8.877 5345	8.879 2013	8.880 8618	8.882 5159	8.884 1636	27
34	8.875 8891	8.877 5623	8.879 2291	8.880 8894	8.882 5434	8.884 1911	26
35	8.875 9170	8.877 5901	8.879 2568	8.880 9170	8.882 5709	8.884 2185	25
36	8.875 9450	8.877 6180	8.879 2845	8.880 9446	8.882 5984	8.884 2459	24
37	8.875 9729	8.877 6458	8.879 3122	8.880 9722	8.882 6259	8.884 2733	23
38	8.876 0008	8.877 6736	8.879 3399	8.880 9999	8.882 6534	8.884 3007	22
39	8.876 0288	8.877 7014	8.879 3677	8.881 0275	8.882 6809	8.884 3281	21
40	8.876 0567	8.877 7293	8.879 3954	8.881 0551	8.882 7084	8.884 3555	20
41	8.876 0846	8.877 7571	8.879 4231	8.881 0827	8.882 7359	8.884 3829	19
42	8.876 1126	8.877 7849	8.879 4508	8.881 1103	8.882 7634	8.884 4103	18
43	8.876 1405	8.877 8127	8.879 4785	8.881 1379	8.882 7909	8.884 4377	17
44	8.876 1684	8.877 8405	8.879 5062	8.881 1655	8.882 8184	8.884 4651	16
45	8.876 1963	8.877 8684	8.879 5339	8.881 1931	8.882 8459	8.884 4924	15
46	8.876 2243	8.877 8962	8.879 5616	8.881 2207	8.882 8734	8.884 5198	14
47	8.876 2522	8.877 9240	8.879 5893	8.881 2483	8.882 9009	8.884 5472	13
48	8.876 2801	8.877 9518	8.879 6170	8.881 2759	8.882 9284	8.884 5746	12
49	8.876 3080	8.877 9796	8.879 6447	8.881 3035	8.882 9559	8.884 6020	11
50	8.876 3359	8.878 0074	8.879 6724	8.881 3311	8.882 9834	8.884 6294	10
51	8.876 3638	8.878 0352	8.879 7001	8.881 3587	8.883 0109	8.884 6567	9
52	8.876 3917	8.878 0630	8.879 7278	8.881 3863	8.883 0383	8.884 6841	8
53	8.876 4197	8.878 0908	8.879 7555	8.881 4138	8.883 0658	8.884 7115	7
54	8.876 4476	8.878 1186	8.879 7832	8.881 4414	8.883 0933	8.884 7389	6
55	8.876 4755	8.878 1464	8.879 8109	8.881 4690	8.883 1208	8.884 7663	5
56	8.876 5034	8.878 1742	8.879 8386	8.881 4966	8.883 1483	8.884 7936	4
57	8.876 5313	8.878 2020	8.879 8663	8.881 5242	8.883 1757	8.884 8210	3
58	8.876 5592	8.878 2298	8.879 8940	8.881 5518	8.883 2032	8.884 8484	2
59	8.876 5871	8.878 2576	8.879 9216	8.881 5793	8.883 2307	8.884 8757	1
60	8.876 6150	8.878 2854	8.879 9493	8.881 6069	8.883 2581	8.884 9031	0
″	41′	40′	39′	38′	37′	36′	″

cos 85°

tang 4°

″	18′	19′	20′	21′	22′	23′	″
0	8.876 1623	8.877 8487	8.879 5286	8.881 2022	8.882 8694	8.884 5303	60
1	8.876 1904	8.877 8767	8.879 5566	8.881 2300	8.882 8971	8.884 5579	59
2	8.876 2186	8.877 9048	8.879 5845	8.881 2579	8.882 9249	8.884 5856	58
3	8.876 2467	8.877 9328	8.879 6125	8.881 2857	8.882 9526	8.884 6132	57
4	8.876 2749	8.877 9609	8.879 6404	8.881 3135	8.882 9803	8.884 6408	56
5	8.876 3030	8.877 9889	8.879 6683	8.881 3414	8.883 0080	8.884 6684	55
6	8.876 3312	8.878 0170	8.879 6963	8.881 3692	8.883 0358	8.884 6961	54
7	8.876 3593	8.878 0450	8.879 7242	8.881 3970	8.883 0635	8.884 7237	53
8	8.876 3875	8.878 0730	8.879 7521	8.881 4249	8.883 0912	8.884 7513	52
9	8.876 4156	8.878 1011	8.879 7801	8.881 4527	8.883 1189	8.884 7789	51
10	8.876 4438	8.878 1291	8.879 8080	8.881 4805	8.883 1467	8.884 8065	50
11	8.876 4719	8.878 1571	8.879 8359	8.881 5083	8.883 1744	8.884 8341	49
12	8.876 5001	8.878 1852	8.879 8639	8.881 5361	8.883 2021	8.884 8617	48
13	8.876 5282	8.878 2132	8.879 8918	8.881 5640	8.883 2298	8.884 8893	47
14	8.876 5563	8.878 2412	8.879 9197	8.881 5918	8.883 2575	8.884 9169	46
15	8.876 5845	8.878 2693	8.879 9476	8.881 6196	8.883 2852	8.884 9446	45
16	8.876 6126	8.878 2973	8.879 9755	8.881 6474	8.883 3129	8.884 9722	44
17	8.876 6407	8.878 3253	8.880 0035	8.881 6752	8.883 3406	8.884 9998	43
18	8.876 6689	8.878 3533	8.880 0314	8.881 7030	8.883 3683	8.885 0274	42
19	8.876 6970	8.878 3814	8.880 0593	8.881 7308	8.883 3960	8.885 0550	41
20	8.876 7251	8.878 4094	8.880 0872	8.881 7586	8.883 4237	8.885 0825	40
21	8.876 7532	8.878 4374	8.880 1151	8.881 7864	8.883 4514	8.885 1101	39
22	8.876 7814	8.878 4654	8.880 1430	8.881 8142	8.883 4791	8.885 1377	38
23	8.876 8095	8.878 4934	8.880 1709	8.881 8420	8.883 5068	8.885 1653	37
24	8.876 8376	8.878 5214	8.880 1988	8.881 8698	8.883 5345	8.885 1929	36
25	8.876 8657	8.878 5494	8.880 2267	8.881 8976	8.883 5622	8.885 2205	35
26	8.876 8938	8.878 5774	8.880 2546	8.881 9254	8.883 5899	8.885 2481	34
27	8.876 9220	8.878 6055	8.880 2825	8.881 9532	8.883 6176	8.885 2757	33
28	8.876 9501	8.878 6335	8.880 3104	8.881 9810	8.883 6453	8.885 3033	32
29	8.876 9782	8.878 6615	8.880 3383	8.882 0088	8.883 6730	8.885 3308	31
30	8.877 0063	8.878 6895	8.880 3662	8.882 0366	8.883 7006	8.885 3584	30
31	8.877 0344	8.878 7175	8.880 3941	8.882 0644	8.883 7283	8.885 3860	29
32	8.877 0625	8.878 7455	8.880 4220	8.882 0922	8.883 7560	8.885 4136	28
33	8.877 0906	8.878 7734	8.880 4499	8.882 1199	8.883 7837	8.885 4411	27
34	8.877 1187	8.878 8014	8.880 4778	8.882 1477	8.883 8113	8.885 4687	26
35	8.877 1468	8.878 8294	8.880 5056	8.882 1755	8.883 8390	8.885 4963	25
36	8.877 1749	8.878 8574	8.880 5335	8.882 2033	8.883 8667	8.885 5238	24
37	8.877 2030	8.878 8854	8.880 5614	8.882 2310	8.883 8944	8.885 5514	23
38	8.877 2311	8.878 9134	8.880 5893	8.882 2588	8.883 9220	8.885 5790	22
39	8.877 2592	8.878 9414	8.880 6172	8.882 2866	8.883 9497	8.885 6065	21
40	8.877 2873	8.878 9694	8.880 6450	8.882 3144	8.883 9774	8.885 6341	20
41	8.877 3153	8.878 9973	8.880 6729	8.882 3421	8.884 0050	8.885 6617	19
42	8.877 3434	8.879 0253	8.880 7008	8.882 3699	8.884 0327	8.885 6892	18
43	8.877 3715	8.879 0533	8.880 7287	8.882 3977	8.884 0604	8.885 7168	17
44	8.877 3996	8.879 0813	8.880 7565	8.882 4254	8.884 0880	8.885 7443	16
45	8.877 4277	8.879 1092	8.880 7844	8.882 4532	8.884 1157	8.885 7719	15
46	8.877 4558	8.879 1372	8.880 8123	8.882 4809	8.884 1433	8.885 7994	14
47	8.877 4838	8.879 1652	8.880 8401	8.882 5087	8.884 1710	8.885 8270	13
48	8.877 5119	8.879 1932	8.880 8680	8.882 5365	8.884 1986	8.885 8545	12
49	8.877 5400	8.879 2211	8.880 8958	8.882 5642	8.884 2263	8.885 8821	11
50	8.877 5681	8.879 2491	8.880 9237	8.882 5920	8.884 2539	8.885 9096	10
51	8.877 5961	8.879 2770	8.880 9516	8.882 6197	8.884 2816	8.885 9372	9
52	8.877 6242	8.879 3050	8.880 9794	8.882 6475	8.884 3092	8.885 9647	8
53	8.877 6523	8.879 3330	8.881 0073	8.882 6752	8.884 3369	8.885 9922	7
54	8.877 6803	8.879 3609	8.881 0351	8.882 7030	8.884 3645	8.886 0198	6
55	8.877 7084	8.879 3889	8.881 0630	8.882 7307	8.884 3921	8.886 0473	5
56	8.877 7364	8.879 4168	8.881 0908	8.882 7584	8.884 4198	8.886 0748	4
57	8.877 7645	8.879 4448	8.881 1187	8.882 7862	8.884 4474	8.886 1024	3
58	8.877 7926	8.879 4727	8.881 1465	8.882 8139	8.884 4750	8.886 1299	2
59	8.877 8206	8.879 5007	8.881 1744	8.882 8417	8.884 5027	8.886 1574	1
60	8.877 8487	8.879 5286	8.881 2022	8.882 8694	8.884 5303	8.886 1850	0
″	41′	40′	39′	38′	37′	36′	″

cotg 85°

sin 4°

″	24′	25′	26′	27′	28′	29′	″
0	8.884 9031	8.886 5418	8.888 1743	8.889 8007	8.891 4209	8.893 0351	60
1	8.884 9305	8.886 5691	8.888 2015	8.889 8277	8.891 4479	8.893 0620	59
2	8.884 9578	8.886 5963	8.888 2286	8.889 8548	8.891 4748	8.893 0888	58
3	8.884 9852	8.886 6236	8.888 2558	8.889 8818	8.891 5018	8.893 1157	57
4	8.885 0125	8.886 6508	8.888 2829	8.889 9089	8.891 5287	8.893 1425	56
5	8.885 0399	8.886 6781	8.888 3101	8.889 9359	8.891 5557	8.893 1694	55
6	8.885 0672	8.886 7053	8.888 3372	8.889 9630	8.891 5826	8.893 1962	54
7	8.885 0946	8.886 7326	8.888 3644	8.889 9900	8.891 6096	8.893 2230	53
8	8.885 1219	8.886 7598	8.888 3915	8.890 0171	8.891 6365	8.893 2499	52
9	8.885 1493	8.886 7871	8.888 4187	8.890 0441	8.891 6634	8.893 2767	51
10	8.885 1766	8.886 8143	8.888 4458	8.890 0711	8.891 6904	8.893 3036	50
11	8.885 2040	8.886 8416	8.888 4729	8.890 0982	8.891 7173	8.893 3304	49
12	8.885 2313	8.886 8688	8.888 5001	8.890 1252	8.891 7442	8.893 3572	48
13	8.885 2587	8.886 8960	8.888 5272	8.890 1522	8.891 7712	8.893 3841	47
14	8.885 2860	8.886 9233	8.888 5543	8.890 1793	8.891 7981	8.893 4109	46
15	8.885 3134	8.886 9505	8.888 5815	8.890 2063	8.891 8250	8.893 4377	45
16	8.885 3407	8.886 9777	8.888 6086	8.890 2333	8.891 8520	8.893 4646	44
17	8.885 3680	8.887 0050	8.888 6357	8.890 2604	8.891 8789	8.893 4914	43
18	8.885 3954	8.887 0322	8.888 6629	8.890 2874	8.891 9058	8.893 5182	42
19	8.885 4227	8.887 0594	8.888 6900	8.890 3144	8.891 9327	8.893 5450	41
20	8.885 4500	8.887 0867	8.888 7171	8.890 3414	8.891 9597	8.893 5718	40
21	8.885 4773	8.887 1139	8.888 7442	8.890 3684	8.891 9866	8.893 5987	39
22	8.885 5047	8.887 1411	8.888 7714	8.890 3955	8.892 0135	8.893 6255	38
23	8.885 5320	8.887 1683	8.888 7985	8.890 4225	8.892 0404	8.893 6523	37
24	8.885 5593	8.887 1955	8.888 8256	8.890 4495	8.892 0673	8.893 6791	36
25	8.885 5866	8.887 2228	8.888 8527	8.890 4765	8.892 0942	8.893 7059	35
26	8.885 6140	8.887 2500	8.888 8798	8.890 5035	8.892 1211	8.893 7327	34
27	8.885 6413	8.887 2772	8.888 9069	8.890 5305	8.892 1481	8.893 7595	33
28	8.885 6686	8.887 3044	8.888 9340	8.890 5575	8.892 1750	8.893 7863	32
29	8.885 6959	8.887 3316	8.888 9611	8.890 5845	8.892 2019	8.893 8132	31
30	8.885 7232	8.887 3588	8.888 9883	8.890 6116	8.892 2288	8.893 8400	30
31	8.885 7505	8.887 3860	8.889 0154	8.890 6386	8.892 2557	8.893 8668	29
32	8.885 7778	8.887 4132	8.889 0425	8.890 6656	8.892 2826	8.893 8936	28
33	8.885 8052	8.887 4404	8.889 0696	8.890 6926	8.892 3095	8.893 9204	27
34	8.885 8325	8.887 4676	8.889 0967	8.890 7196	8.892 3364	8.893 9472	26
35	8.885 8598	8.887 4948	8.889 1238	8.890 7466	8.892 3633	8.893 9740	25
36	8.885 8871	8.887 5220	8.889 1509	8.890 7735	8.892 3902	8.894 0007	24
37	8.885 9144	8.887 5492	8.889 1780	8.890 8005	8.892 4171	8.894 0275	23
38	8.885 9417	8.887 5764	8.889 2050	8.890 8275	8.892 4439	8.894 0543	22
39	8.885 9690	8.887 6036	8.889 2321	8.890 8545	8.892 4708	8.894 0811	21
40	8.885 9963	8.887 6308	8.889 2592	8.890 8815	8.892 4977	8.894 1079	20
41	8.886 0235	8.887 6580	8.889 2863	8.890 9085	8.892 5246	8.894 1347	19
42	8.886 0508	8.887 6852	8.889 3134	8.890 9355	8.892 5515	8.894 1615	18
43	8.886 0781	8.887 7124	8.889 3405	8.890 9625	8.892 5784	8.894 1883	17
44	8.886 1054	8.887 7396	8.889 3676	8.890 9894	8.892 6053	8.894 2150	16
45	8.886 1327	8.887 7668	8.889 3947	8.891 0164	8.892 6321	8.894 2418	15
46	8.886 1600	8.887 7939	8.889 4217	8.891 0434	8.892 6590	8.894 2686	14
47	8.886 1873	8.887 8211	8.889 4488	8.891 0704	8.892 6859	8.894 2954	13
48	8.886 2146	8.887 8483	8.889 4759	8.891 0974	8.892 7128	8.894 3221	12
49	8.886 2418	8.887 8755	8.889 5030	8.891 1243	8.892 7396	8.894 3489	11
50	8.886 2691	8.887 9027	8.889 5300	8.891 1513	8.892 7665	8.894 3757	10
51	8.886 2964	8.887 9298	8.889 5571	8.891 1783	8.892 7934	8.894 4025	9
52	8.886 3237	8.887 9570	8.889 5842	8.891 2052	8.892 8202	8.894 4292	8
53	8.886 3509	8.887 9842	8.889 6112	8.891 2322	8.892 8471	8.894 4560	7
54	8.886 3782	8.888 0113	8.889 6383	8.891 2592	8.892 8740	8.894 4827	6
55	8.886 4055	8.888 0385	8.889 6654	8.891 2861	8.892 9008	8.894 5095	5
56	8.886 4327	8.888 0657	8.889 6924	8.891 3131	8.892 9277	8.894 5363	4
57	8.886 4600	8.888 0928	8.889 7195	8.891 3401	8.892 9546	8.894 5630	3
58	8.886 4873	8.888 1200	8.889 7466	8.891 3670	8.892 9814	8.894 5898	2
59	8.886 5145	8.888 1471	8.889 7736	8.891 3940	8.893 0083	8.894 6165	1
60	8.886 5418	8.888 1743	8.889 8007	8.891 4209	8.893 0351	8.894 6433	0
″	35′	34′	33′	32′	31′	30′	″

cos 85°

″	24′	25′	26′	27′	28′	29′	″
0	8.886 1850	8.887 8334	8.889 4757	8.891 1119	8.892 7420	8.894 3660	60
1	8.886 2125	8.887 8608	8.889 5030	8.891 1391	8.892 7091	8.894 3931	59
2	8.886 2400	8.887 8882	8.889 5303	8.891 1663	8.892 7962	8.894 4201	58
3	8.886 2675	8.887 9157	8.889 5576	8.891 1935	8.892 8233	8.894 4471	57
4	8.886 2950	8.887 9431	8.889 5850	8.891 2207	8.892 8504	8.894 4741	56
5	8.886 3226	8.887 9705	8.889 6123	8.891 2479	8.892 8775	8.894 5011	55
6	8.886 3501	8.887 9979	8.889 6396	8.891 2751	8.892 9046	8.894 5281	54
7	8.886 3776	8.888 0253	8.889 6669	8.891 3023	8.892 9317	8.894 5551	53
8	8.886 4051	8.888 0527	8.889 6942	8.891 3296	8.892 9589	8.894 5821	52
9	8.886 4326	8.888 0801	8.889 7215	8.891 3568	8.892 9860	8.894 6091	51
10	8.886 4601	8.888 1075	8.889 7488	8.891 3840	8.893 0131	8.894 6361	50
11	8.886 4876	8.888 1349	8.889 7761	8.891 4112	8.893 0402	8.894 6631	49
12	8.886 5151	8.888 1623	8.889 8034	8.891 4384	8.893 0673	8.894 6901	48
13	8.886 5426	8.888 1898	8.889 8307	8.891 4656	8.893 0944	8.894 7171	47
14	8.886 5701	8.888 2172	8.889 8580	8.891 4928	8.893 1215	8.894 7441	46
15	8.886 5976	8.888 2445	8.889 8853	8.891 5200	8.893 1485	8.894 7711	45
16	8.886 6251	8.888 2719	8.889 9126	8.891 5471	8.893 1756	8.894 7981	44
17	8.886 6526	8.888 2993	8.889 9399	8.891 5743	8.893 2027	8.894 8251	43
18	8.886 6801	8.888 3267	8.889 9672	8.891 6015	8.893 2298	8.894 8521	42
19	8.886 7076	8.888 3541	8.889 9945	8.891 6287	8.893 2569	8.894 8791	41
20	8.886 7351	8.888 3815	8.890 0218	8.891 6559	8.893 2840	8.894 9061	40
21	8.886 7626	8.888 4089	8.890 0490	8.891 6831	8.893 3111	8.894 9331	39
22	8.886 7901	8.888 4363	8.890 0763	8.891 7103	8.893 3382	8.894 9600	38
23	8.886 8176	8.888 4637	8.890 1036	8.891 7374	8.893 3652	8.894 9870	37
24	8.886 8451	8.888 4911	8.890 1309	8.891 7646	8.893 3923	8.895 0140	36
25	8.886 8726	8.888 5184	8.890 1582	8.891 7918	8.893 4194	8.895 0410	35
26	8.886 9000	8.888 5458	8.890 1854	8.891 8190	8.893 4465	8.895 0680	34
27	8.886 9275	8.888 5732	8.890 2127	8.891 8462	8.893 4735	8.895 0949	33
28	8.886 9550	8.888 6006	8.890 2400	8.891 8733	8.893 5006	8.895 1219	32
29	8.886 9825	8.888 6279	8.890 2673	8.891 9005	8.893 5277	8.895 1489	31
30	8.887 0100	8.888 6553	8.890 2945	8.891 9277	8.893 5548	8.895 1758	30
31	8.887 0374	8.888 6827	8.890 3218	8.891 9548	8.893 5818	8.895 2028	29
32	8.887 0649	8.888 7100	8.890 3491	8.891 9820	8.893 6089	8.895 2298	28
33	8.887 0924	8.888 7374	8.890 3763	8.892 0092	8.893 6360	8.895 2567	27
34	8.887 1198	8.888 7648	8.890 4036	8.892 0363	8.893 6630	8.895 2837	26
35	8.887 1473	8.888 7921	8.890 4309	8.892 0635	8.893 6901	8.895 3107	25
36	8.887 1748	8.888 8195	8.890 4581	8.892 0906	8.893 7171	8.895 3376	24
37	8.887 2022	8.888 8469	8.890 4854	8.892 1178	8.893 7442	8.895 3646	23
38	8.887 2297	8.888 8742	8.890 5126	8.892 1450	8.893 7712	8.895 3915	22
39	8.887 2571	8.888 9016	8.890 5399	8.892 1721	8.893 7983	8.895 4185	21
40	8.887 2846	8.888 9289	8.890 5671	8.892 1993	8.893 8254	8.895 4454	20
41	8.887 3121	8.888 9563	8.890 5944	8.892 2264	8.893 8524	8.895 4724	19
42	8.887 3395	8.888 9836	8.890 6216	8.892 2536	8.893 8795	8.895 4993	18
43	8.887 3670	8.889 0110	8.890 6489	8.892 2807	8.893 9065	8.895 5263	17
44	8.887 3944	8.889 0383	8.890 6761	8.892 3079	8.893 9335	8.895 5532	16
45	8.887 4219	8.889 0657	8.890 7034	8.892 3350	8.893 9606	8.895 5802	15
46	8.887 4493	8.889 0930	8.890 7306	8.892 3621	8.893 9876	8.895 6071	14
47	8.887 4768	8.889 1204	8.890 7579	8.892 3893	8.894 0147	8.895 6341	13
48	8.887 5042	8.889 1477	8.890 7851	8.892 4164	8.894 0417	8.895 6610	12
49	8.887 5316	8.889 1751	8.890 8123	8.892 4436	8.894 0687	8.895 6879	11
50	8.887 5591	8.889 2024	8.890 8396	8.892 4707	8.894 0958	8.895 7149	10
51	8.887 5865	8.889 2297	8.890 8668	8.892 4978	8.894 1228	8.895 7418	9
52	8.887 6140	8.889 2571	8.890 8941	8.892 5250	8.894 1498	8.895 7687	8
53	8.887 6414	8.889 2844	8.890 9213	8.892 5521	8.894 1769	8.895 7957	7
54	8.887 6688	8.889 3117	8.890 9485	8.892 5792	8.894 2039	8.895 8226	6
55	8.887 6963	8.889 3391	8.890 9757	8.892 6064	8.894 2309	8.895 8495	5
56	8.887 7237	8.889 3664	8.891 0030	8.892 6335	8.894 2580	8.895 8765	4
57	8.887 7511	8.889 3937	8.891 0302	8.892 6606	8.894 2850	8.895 9034	3
58	8.887 7786	8.889 4210	8.891 0574	8.892 6877	8.894 3120	8.895 9303	2
59	8.887 8060	8.889 4484	8.891 0846	8.892 7148	8.894 3390	8.895 9572	1
60	8.887 8334	8.889 4757	8.891 1119	8.892 7420	8.894 3660	8.895 9842	0
″	35′	34′	33′	32′	31′	30′	″

sin 4°

″	30′	31′	32′	33′	34′	35′	″
0	8.894 6433	8.896 2455	8.897 8418	8.899 4322	8.901 0168	8.902 5955	60
1	8.894 6701	8.896 2722	8.897 8684	8.899 4587	8.901 0431	8.902 6218	59
2	8.894 6968	8.896 2988	8.897 8949	8.899 4851	8.901 0695	8.902 6481	58
3	8.894 7236	8.896 3255	8.897 9215	8.899 5116	8.901 0958	8.902 6743	57
4	8.894 7503	8.896 3521	8.897 9480	8.899 5380	8.901 1222	8.902 7006	56
5	8.894 7770	8.896 3788	8.897 9746	8.899 5645	8.901 1485	8.902 7268	55
6	8.894 8038	8.896 4054	8.898 0011	8.899 5909	8.901 1749	8.902 7531	54
7	8.894 8305	8.896 4320	8.898 0276	8.899 6174	8.901 2013	8.902 7793	53
8	8.894 8573	8.896 4587	8.898 0542	8.899 6438	8.901 2276	8.902 8056	52
9	8.894 8840	8.896 4853	8.898 0807	8.899 6703	8.901 2539	8.902 8318	51
10	8.894 9107	8.896 5120	8.898 1073	8.899 6967	8.901 2803	8.902 8581	50
11	8.894 9375	8.896 5386	8.898 1338	8.899 7231	8.901 3066	8.902 8843	49
12	8.894 9642	8.896 5652	8.898 1603	8.899 7496	8.901 3330	8.902 9106	48
13	8.894 9909	8.896 5919	8.898 1869	8.899 7760	8.901 3593	8.902 9368	47
14	8.895 0177	8.896 6185	8.898 2134	8.899 8025	8.901 3857	8.902 9631	46
15	8.895 0444	8.896 6451	8.898 2399	8.899 8289	8.901 4120	8.902 9893	45
16	8.895 0711	8.896 6718	8.898 2665	8.899 8553	8.901 4383	8.903 0156	44
17	8.895 0979	8.896 6984	8.898 2930	8.899 8818	8.901 4647	8.903 0418	43
18	8.895 1246	8.896 7250	8.898 3195	8.899 9082	8.901 4910	8.903 0680	42
19	8.895 1513	8.896 7516	8.898 3461	8.899 9346	8.901 5173	8.903 0943	41
20	8.895 1780	8.896 7783	8.898 3726	8.899 9610	8.901 5437	8.903 1205	40
21	8.895 2047	8.896 8049	8.898 3991	8.899 9875	8.901 5700	8.903 1467	39
22	8.895 2315	8.896 8315	8.898 4256	8.900 0139	8.901 5963	8.903 1730	38
23	8.895 2582	8.896 8581	8.898 4521	8.900 0403	8.901 6226	8.903 1992	37
24	8.895 2849	8.896 8847	8.898 4787	8.900 0667	8.901 6490	8.903 2254	36
25	8.895 3116	8.896 9113	8.898 5052	8.900 0931	8.901 6753	8.903 2516	35
26	8.895 3383	8.896 9380	8.898 5317	8.900 1196	8.901 7016	8.903 2779	34
27	8.895 3650	8.896 9646	8.898 5582	8.900 1460	8.901 7279	8.903 3041	33
28	8.895 3917	8.896 9912	8.898 5847	8.900 1724	8.901 7542	8.903 3303	32
29	8.895 4184	8.897 0178	8.898 6112	8.900 1988	8.901 7806	8.903 3565	31
30	8.895 4451	8.897 0444	8.898 6377	8.900 2252	8.901 8069	8.903 3828	30
31	8.895 4719	8.897 0710	8.898 6642	8.900 2516	8.901 8332	8.903 4090	29
32	8.895 4986	8.897 0976	8.898 6907	8.900 2780	8.901 8595	8.903 4352	28
33	8.895 5253	8.897 1242	8.898 7172	8.900 3044	8.901 8858	8.903 4614	27
34	8.895 5519	8.897 1508	8.898 7437	8.900 3308	8.901 9121	8.903 4876	26
35	8.895 5786	8.897 1774	8.898 7702	8.900 3572	8.901 9384	8.903 5138	25
36	8.895 6053	8.897 2040	8.898 7967	8.900 3836	8.901 9647	8.903 5400	24
37	8.895 6320	8.897 2306	8.898 8232	8.900 4100	8.901 9910	8.903 5662	23
38	8.895 6587	8.897 2572	8.898 8497	8.900 4364	8.902 0173	8.903 5924	22
39	8.895 6854	8.897 2838	8.898 8762	8.900 4628	8.902 0436	8.903 6186	21
40	8.895 7121	8.897 3104	8.898 9027	8.900 4892	8.902 0699	8.903 6448	20
41	8.895 7388	8.897 3369	8.898 9292	8.900 5156	8.902 0962	8.903 6710	19
42	8.895 7655	8.897 3635	8.898 9557	8.900 5420	8.902 1225	8.903 6972	18
43	8.895 7922	8.897 3901	8.898 9822	8.900 5684	8.902 1488	8.903 7234	17
44	8.895 8188	8.897 4167	8.899 0087	8.900 5948	8.902 1751	8.903 7496	16
45	8.895 8455	8.897 4433	8.899 0351	8.900 6212	8.902 2014	8.903 7758	15
46	8.895 8722	8.897 4699	8.899 0616	8.900 6476	8.902 2277	8.903 8020	14
47	8.895 8989	8.897 4964	8.899 0881	8.900 6739	8.902 2540	8.903 8282	13
48	8.895 9255	8.897 5230	8.899 1146	8.900 7003	8.902 2802	8.903 8544	12
49	8.895 9522	8.897 5496	8.899 1411	8.900 7267	8.902 3065	8.903 8806	11
50	8.895 9789	8.897 5762	8.899 1675	8.900 7531	8.902 3328	8.903 9068	10
51	8.896 0056	8.897 6027	8.899 1940	8.900 7795	8.902 3591	8.903 9330	9
52	8.896 0322	8.897 6293	8.899 2205	8.900 8058	8.902 3854	8.903 9591	8
53	8.896 0589	8.897 6559	8.899 2470	8.900 8322	8.902 4116	8.903 9853	7
54	8.896 0856	8.897 6824	8.899 2734	8.900 8586	8.902 4379	8.904 0115	6
55	8.896 1122	8.897 7090	8.899 2999	8.900 8849	8.902 4642	8.904 0377	5
56	8.896 1389	8.897 7356	8.899 3264	8.900 9113	8.902 4905	8.904 0639	4
57	8.896 1655	8.897 7621	8.899 3528	8.900 9377	8.902 5167	8.904 0900	3
58	8.896 1922	8.897 7887	8.899 3793	8.900 9640	8.902 5430	8.904 1162	2
59	8.896 2189	8.897 8152	8.899 4057	8.900 9904	8.902 5693	8.904 1424	1
60	8.896 2455	8.897 8418	8.899 4322	8.901 0168	8.902 5955	8.904 1685	0
″	29′	28′	27′	26′	25′	24′	″

cos 85°

tang 4°

″	30′	31′	32′	33′	34′	35′	″
0	8.895 9842	8.897 5963	8.899 2026	8.900 8030	8.902 3977	8.903 9866	60
1	8.896 0111	8.897 6231	8.899 2293	8.900 8297	8.902 4242	8.904 0130	59
2	8.896 0380	8.897 6500	8.899 2560	8.900 8563	8.902 4507	8.904 0394	58
3	8.896 0649	8.897 6768	8.899 2828	8.900 8829	8.902 4773	8.904 0659	57
4	8.896 0918	8.897 7036	8.899 3095	8.900 9095	8.902 5038	8.904 0923	56
5	8.896 1187	8.897 7304	8.899 3362	8.900 9362	8.902 5303	8.904 1187	55
6	8.896 1456	8.897 7572	8.899 3629	8.900 9628	8.902 5568	8.904 1451	54
7	8.896 1725	8.897 7840	8.899 3896	8.900 9894	8.902 5833	8.904 1716	53
8	8.896 1994	8.897 8108	8.899 4163	8.901 0160	8.902 6099	8.904 1980	52
9	8.896 2264	8.897 8376	8.899 4430	8.901 0426	8.902 6364	8.904 2244	51
10	8.896 2533	8.897 8644	8.899 4698	8.901 0692	8.902 6629	8.904 2508	50
11	8.896 2802	8.897 8912	8.899 4965	8.901 0958	8.902 6894	8.904 2772	49
12	8.896 3071	8.897 9181	8.899 5232	8.901 1224	8.902 7159	8.904 3036	48
13	8.896 3340	8.897 9449	8.899 5499	8.901 1490	8.902 7424	8.904 3301	47
14	8.896 3609	8.897 9716	8.899 5766	8.901 1756	8.902 7689	8.904 3565	46
15	8.896 3877	8.897 9984	8.899 6033	8.901 2022	8.902 7954	8.904 3829	45
16	8.896 4146	8.898 0252	8.899 6300	8.901 2288	8.902 8219	8.904 4093	44
17	8.896 4415	8.898 0520	8.899 6567	8.901 2554	8.902 8484	8.904 4357	43
18	8.896 4684	8.898 0788	8.899 6834	8.901 2820	8.902 8749	8.904 4621	42
19	8.896 4953	8.898 1056	8.899 7100	8.901 3086	8.902 9014	8.904 4885	41
20	8.896 5222	8.898 1324	8.899 7367	8.901 3352	8.902 9279	8.904 5149	40
21	8.896 5491	8.898 1592	8.899 7634	8.901 3618	8.902 9544	8.904 5413	39
22	8.896 5760	8.898 1860	8.899 7901	8.901 3884	8.902 9809	8.904 5677	38
23	8.896 6028	8.898 2128	8.899 8168	8.901 4150	8.903 0074	8.904 5941	37
24	8.896 6297	8.898 2395	8.899 8435	8.901 4416	8.903 0339	8.904 6205	36
25	8.896 6566	8.898 2663	8.899 8702	8.901 4682	8.903 0604	8.904 6469	35
26	8.896 6835	8.898 2931	8.899 8968	8.901 4948	8.903 0869	8.904 6733	34
27	8.896 7104	8.898 3199	8.899 9235	8.901 5213	8.903 1134	8.904 6997	33
28	8.896 7372	8.898 3467	8.899 9502	8.901 5479	8.903 1399	8.904 7261	32
29	8.896 7641	8.898 3734	8.899 9769	8.901 5745	8.903 1664	8.904 7525	31
30	8.896 7910	8.898 4002	8.900 0036	8.901 6011	8.903 1928	8.904 7788	30
31	8.896 8178	8.898 4270	8.900 0302	8.901 6277	8.903 2193	8.904 8052	29
32	8.896 8447	8.898 4537	8.900 0569	8.901 6542	8.903 2458	8.904 8316	28
33	8.896 8716	8.898 4805	8.900 0836	8.901 6808	8.903 2723	8.904 8580	27
34	8.896 8984	8.898 5073	8.900 1102	8.901 7074	8.903 2988	8.904 8844	26
35	8.896 9253	8.898 5340	8.900 1369	8.901 7340	8.903 3252	8.904 9108	25
36	8.896 9522	8.898 5608	8.900 1636	8.901 7605	8.903 3517	8.904 9371	24
37	8.896 9790	8.898 5876	8.900 1902	8.901 7871	8.903 3782	8.904 9635	23
38	8.897 0059	8.898 6143	8.900 2169	8.901 8137	8.903 4046	8.904 9899	22
39	8.897 0327	8.898 6411	8.900 2436	8.901 8402	8.903 4311	8.905 0163	21
40	8.897 0596	8.898 6678	8.900 2702	8.901 8668	8.903 4576	8.905 0426	20
41	8.897 0864	8.898 6946	8.900 2969	8.901 8933	8.903 4840	8.905 0690	19
42	8.897 1133	8.898 7213	8.900 3235	8.901 9199	8.903 5105	8.905 0954	18
43	8.897 1401	8.898 7481	8.900 3502	8.901 9465	8.903 5370	8.905 1217	17
44	8.897 1670	8.898 7748	8.900 3768	8.901 9730	8.903 5634	8.905 1481	16
45	8.897 1938	8.898 8016	8.900 4035	8.901 9996	8.903 5899	8.905 1745	15
46	8.897 2207	8.898 8283	8.900 4301	8.902 0261	8.903 6163	8.905 2008	14
47	8.897 2475	8.898 8551	8.900 4568	8.902 0527	8.903 6428	8.905 2272	13
48	8.897 2744	8.898 8818	8.900 4834	8.902 0792	8.903 6692	8.905 2535	12
49	8.897 3012	8.898 9086	8.900 5101	8.902 1058	8.903 6957	8.905 2799	11
50	8.897 3280	8.898 9353	8.900 5367	8.902 1323	8.903 7221	8.905 3063	10
51	8.897 3549	8.898 9620	8.900 5634	8.902 1589	8.903 7486	8.905 3326	9
52	8.897 3817	8.898 9888	8.900 5900	8.902 1854	8.903 7750	8.905 3590	8
53	8.897 4085	8.899 0155	8.900 6166	8.902 2119	8.903 8015	8.905 3853	7
54	8.897 4354	8.899 0422	8.900 6433	8.902 2385	8.903 8279	8.905 4117	6
55	8.897 4622	8.899 0690	8.900 6699	8.902 2650	8.903 8544	8.905 4380	5
56	8.897 4890	8.899 0957	8.900 6965	8.902 2916	8.903 8808	8.905 4643	4
57	8.897 5159	8.899 1224	8.900 7232	8.902 3181	8.903 9073	8.905 4907	3
58	8.897 5427	8.899 1492	8.900 7498	8.902 3446	8.903 9337	8.905 5170	2
59	8.897 5695	8.899 1759	8.900 7764	8.902 3712	8.903 9601	8.905 5434	1
60	8.897 5963	8.899 2026	8.900 8030	8.902 3977	8.903 9866	8.905 5697	0
″	29′	28′	27′	26′	25′	24′	″

cotg 85°

sin 4°

″	36′	37′	38′	39′	40′	41′	″
0	8.904 1685	8.905 7358	8.907 2975	8.908 8535	8.910 4039	8.911 9487	60
1	8.904 1947	8.905 7619	8.907 3234	8.908 8793	8.910 4297	8.911 9744	59
2	8.904 2209	8.905 7880	8.907 3494	8.908 9052	8.910 4554	8.912 0001	58
3	8.904 2470	8.905 8141	8.907 3754	8.908 9311	8.910 4812	8.912 0258	57
4	8.904 2732	8.905 8401	8.907 4014	8.908 9570	8.910 5070	8.912 0515	56
5	8.904 2994	8.905 8662	8.907 4273	8.908 9829	8.910 5328	8.912 0772	55
6	8.904 3255	8.905 8923	8.907 4533	8.909 0088	8.910 5586	8.912 1029	54
7	8.904 3517	8.905 9183	8.907 4793	8.909 0346	8.910 5844	8.912 1286	53
8	8.904 3778	8.905 9444	8.907 5053	8.909 0605	8.910 6102	8.912 1543	52
9	8.904 4040	8.905 9704	8.907 5312	8.909 0864	8.910 6359	8.912 1800	51
10	8.904 4302	8.905 9965	8.907 5572	8.909 1123	8.910 6617	8.912 2057	50
11	8.904 4563	8.906 0226	8.907 5832	8.909 1381	8.910 6875	8.912 2313	49
12	8.904 4825	8.906 0486	8.907 6091	8.909 1640	8.910 7133	8.912 2570	48
13	8.904 5086	8.906 0747	8.907 6351	8.909 1899	8.910 7391	8.912 2827	47
14	8 004 5348	8.906 1007	8.907 6610	8.909 2157	8.910 7648	8.912 3084	46
15	8.904 5609	8.906 1268	8.907 6870	8.909 2416	8.910 7906	8.912 3341	45
16	8.904 5870	8.906 1528	8.907 7129	8.909 2674	8.910 8164	8.912 3597	44
17	8.904 6132	8.906 1789	8.907 7389	8.909 2933	8.910 8421	8.912 3854	43
18	8.904 6393	8.906 2049	8.907 7649	8.909 3192	8.910 8679	8.912 4111	42
19	8.904 6655	8.906 2310	8.907 7908	8.909 3450	8.910 8937	8.912 4368	41
20	8.904 6916	8.906 2570	8.907 8168	8.909 3709	8.910 9194	8.912 4624	40
21	8.904 7177	8.906 2831	8.907 8427	8.909 3967	8.910 9452	8.912 4881	39
22	8.904 7439	8.906 3091	8.907 8687	8.909 4226	8.910 9710	8.912 5138	38
23	8.904 7700	8.906 3351	8.907 8946	8.909 4484	8.910 9967	8.912 5394	37
24	8.904 7961	8.906 3612	8.907 9205	8.909 4743	8.911 0225	8.912 5651	36
25	8.904 8223	8.906 3872	8.907 9465	8.909 5001	8.911 0482	8.912 5908	35
26	8.904 8484	8.906 4132	8.907 9724	8.909 5260	8.911 0740	8.912 6164	34
27	8.904 8745	8.906 4393	8.907 9984	8.909 5518	8.911 0997	8.912 6421	33
28	8.904 9007	8.906 4653	8.908 0243	8.909 5777	8.911 1255	8.912 6678	32
29	8.904 9268	8.906 4913	8.908 0502	8.909 6035	8.911 1512	8.912 6934	31
30	8.904 9529	8.906 5174	8.908 0762	8.909 6294	8.911 1770	8.912 7191	30
31	8.904 9790	8.906 5434	8.908 1021	8.909 6552	8.911 2027	8.912 7447	29
32	8.905 0051	8.906 5694	8.908 1280	8.909 6810	8.911 2285	8.912 7704	28
33	8.905 0313	8.906 5954	8.908 1540	8.909 7069	8.911 2542	8.912 7960	27
34	8.905 0574	8.906 6215	8.908 1799	8.909 7327	8.911 2800	8.912 8217	26
35	8.905 0835	8.906 6475	8.908 2058	8.909 7585	8.911 3057	8.912 8473	25
36	8.905 1096	8.906 6735	8.908 2317	8.909 7844	8.911 3314	8.912 8730	24
37	8.905 1357	8.906 6995	8.908 2577	8.909 8102	8.911 3572	8.912 8986	23
38	8.905 1618	8.906 7255	8.908 2836	8.909 8360	8.911 3829	8.912 9243	22
39	8.905 1879	8.906 7515	8.908 3095	8.909 8619	8.911 4086	8.912 9499	21
40	8.905 2140	8.906 7776	8.908 3354	8.909 8877	8.911 4344	8.912 9756	20
41	8.905 2401	8.906 8036	8.908 3613	8.909 9135	8.911 4601	8.913 0012	19
42	8.905 2662	8.906 8296	8.908 3873	8.909 9393	8.911 4858	8.913 0268	18
43	8.905 2924	8.906 8556	8.908 4132	8.909 9651	8.911 5116	8.913 0525	17
44	8.905 3185	8.906 8816	8.908 4391	8.909 9910	8.911 5373	8.913 0781	16
45	8.905 3446	8.906 9076	8.908 4650	8.910 0168	8.911 5630	8.913 1037	15
46	8.905 3706	8.906 9336	8.908 4909	8.910 0426	8.911 5887	8.913 1294	14
47	8.905 3967	8.906 9596	8.908 5168	8.910 0684	8.911 6145	8.913 1550	13
48	8.905 4228	8.906 9856	8.908 5427	8.910 0942	8.911 6402	8.913 1806	12
49	8.905 4489	8.907 0116	8.908 5686	8.910 1200	8.911 6659	8.913 2063	11
50	8.905 4750	8.907 0376	8.908 5945	8.910 1459	8.911 6916	8.913 2319	10
51	8.905 5011	8.907 0636	8.908 6204	8.910 1717	8.911 7173	8.913 2575	9
52	8.905 5272	8.907 0896	8.908 6463	8.910 1975	8.911 7431	8.913 2831	8
53	8.905 5533	8.907 1156	8.908 6722	8.910 2233	8.911 7688	8.913 3087	7
54	8.905 5794	8.907 1416	8.908 6981	8.910 2491	8.911 7945	8.913 3344	6
55	8.905 6055	8.907 1675	8.908 7240	8.910 2749	8.911 8202	8.913 3600	5
56	8.905 6315	8.907 1935	8.908 7499	8.910 3007	8.911 8459	8.913 3856	4
57	8.905 6576	8.907 2195	8.908 7758	8.910 3265	8.911 8716	8.913 4112	3
58	8.905 6837	8.907 2455	8.908 8017	8.910 3523	8.911 8973	8.913 4368	2
59	8.905 7098	8.907 2715	8.908 8276	8.910 3781	8.911 9230	8.913 4624	1
60	8.905 7358	8.907 2975	8.908 8535	8.910 4039	8.911 9487	8.913 4881	0
″	23′	22′	21′	20′	19′	18′	″

cos 85°

tang 4°

″	36′	37′	38′	39′	40′	41′	″
0	8.905 5697	8.907 1472	8.908 7190	8.910 2853	8.911 8460	8.913 4012	60
1	8.905 5961	8.907 1734	8.908 7452	8.910 3114	8.911 8720	8.913 4270	59
2	8.905 6224	8.907 1997	8.908 7713	8.910 3374	8.911 8979	8.913 4529	58
3	8.905 6487	8.907 2259	8.908 7975	8.910 3635	8.911 9239	8.913 4788	57
4	8.905 6751	8.907 2522	8.908 8236	8.910 3895	8.911 9498	8.913 5047	56
5	8.905 7014	8.907 2784	8.908 8498	8.910 4156	8.911 9758	8.913 5305	55
6	8.905 7277	8.907 3046	8.908 8759	8.910 4416	8.912 0018	8.913 5564	54
7	8.905 7540	8.907 3309	8.908 9021	8.910 4677	8.912 0277	8.913 5823	53
8	8.905 7804	8.907 3571	8.908 9282	8.910 4937	8.912 0537	8.913 6081	52
9	8.905 8067	8.907 3833	8.908 9543	8.910 5198	8.912 0796	8.913 6340	51
10	8.905 8330	8.907 4096	8.908 9805	8.910 5458	8.912 1056	8.913 6598	50
11	8.905 8593	8.907 4358	8.909 0066	8.910 5718	8.912 1315	8.913 6857	49
12	8.905 8857	8.907 4620	8.909 0327	8.910 5979	8.912 1575	8.913 7116	48
13	8.905 9120	8.907 4882	8.909 0589	8.910 6239	8.912 1834	8.913 7374	47
14	8.905 9383	8.907 5145	8.909 0850	8.910 6500	8.912 2094	8.913 7633	46
15	8.905 9646	8.907 5407	8.909 1111	8.910 6760	8.912 2353	8.913 7891	45
16	8.905 9909	8.907 5669	8.909 1373	8.910 7020	8.912 2612	8.913 8150	44
17	8.906 0172	8.907 5931	8.909 1634	8.910 7281	8.912 2872	8.913 8408	43
18	8.906 0436	8.907 6193	8.909 1895	8.910 7541	8.912 3131	8.913 8667	42
19	8.906 0699	8.907 6456	8.909 2156	8.910 7801	8.912 3391	8.913 8925	41
20	8.906 0962	8.907 6718	8.909 2417	8.910 8061	8.912 3650	8.913 9183	40
21	8.906 1225	8.907 6980	8.909 2679	8.910 8322	8.912 3909	8.913 9442	39
22	8.906 1488	8.907 7242	8.909 2940	8.910 8582	8.912 4169	8.913 9700	38
23	8.906 1751	8.907 7504	8.909 3201	8.910 8842	8.912 4428	8.913 9959	37
24	8.906 2014	8.907 7766	8.909 3462	8.910 9102	8.912 4687	8.914 0217	36
25	8.906 2277	8.907 8028	8.909 3723	8.910 9363	8.912 4947	8.914 0475	35
26	8.906 2540	8.907 8290	8.909 3984	8.910 9623	8.912 5206	8.914 0734	34
27	8.906 2803	8.907 8552	8.909 4245	8.910 9883	8.912 5465	8.914 0992	33
28	8.906 3066	8.907 8814	8.909 4507	8.911 0143	8.912 5724	8.914 1250	32
29	8.906 3329	8.907 9076	8.909 4768	8.911 0403	8.912 5983	8.914 1509	31
30	8.906 3592	8.907 9338	8.909 5029	8.911 0663	8.912 6243	8.914 1767	30
31	8.906 3855	8.907 9600	8.909 5290	8.911 0923	8.912 6502	8.914 2025	29
32	8.906 4117	8.907 9862	8.909 5551	8.911 1184	8.912 6761	8.914 2284	28
33	8.906 4380	8.908 0124	8.909 5812	8.911 1444	8.912 7020	8.914 2542	27
34	8.906 4643	8.908 0386	8.909 6073	8.911 1704	8.912 7279	8.914 2800	26
35	8.906 4906	8.908 0648	8.909 6334	8.911 1964	8.912 7538	8.914 3058	25
36	8.906 5169	8.908 0910	8.909 6595	8.911 2224	8.912 7798	8.914 3317	24
37	8.906 5432	8.908 1172	8.909 6856	8.911 2484	8.912 8057	8.914 3575	23
38	8.906 5694	8.908 1434	8.909 7117	8.911 2744	8.912 8316	8.914 3833	22
39	8.906 5957	8.908 1695	8.909 7377	8.911 3004	8.912 8575	8.914 4091	21
40	8.906 6220	8.908 1957	8.909 7638	8.911 3264	8.912 8834	8.914 4349	20
41	8.906 6483	8.908 2219	8.909 7899	8.911 3524	8.912 9093	8.914 4607	19
42	8.906 6745	8.908 2481	8.909 8160	8.911 3784	8.912 9352	8.914 4865	18
43	8.906 7008	8.908 2743	8.909 8421	8.911 4044	8.912 9611	8.914 5124	17
44	8.906 7271	8.908 3004	8.909 8682	8.911 4303	8.912 9870	8.914 5382	16
45	8.906 7534	8.908 3266	8.909 8943	8.911 4563	8.913 0129	8.914 5640	15
46	8.906 7796	8.908 3528	8.909 9203	8.911 4823	8.913 0388	8.914 5898	14
47	8.906 8059	8.908 3790	8.909 9464	8.911 5083	8.913 0647	8.914 6156	13
48	8.906 8322	8.908 4051	8.909 9725	8.911 5343	8.913 0906	8.914 6414	12
49	8.906 8584	8.908 4313	8.909 9986	8.911 5603	8.913 1165	8.914 6672	11
50	8.906 8847	8.908 4575	8.910 0246	8.911 5863	8.913 1424	8.914 6930	10
51	8.906 9109	8.908 4836	8.910 0507	8.911 6122	8.913 1682	8.914 7188	9
52	8.906 9372	8.908 5098	8.910 0768	8.911 6382	8.913 1941	8.914 7446	8
53	8.906 9634	8.908 5360	8.910 1029	8.911 6642	8.913 2200	8.914 7704	7
54	8.906 9897	8.908 5621	8.910 1289	8.911 6902	8.913 2459	8.914 7962	6
55	8.907 0160	8.908 5883	8.910 1550	8.911 7161	8.913 2718	8.914 8219	5
56	8.907 0422	8.908 6144	8.910 1811	8.911 7421	8.913 2977	8.914 8477	4
57	8.907 0685	8.908 6406	8.910 2071	8.911 7681	8.913 3235	8.914 8735	3
58	8.907 0947	8.908 6667	8.910 2332	8.911 7941	8.913 3494	8.914 8993	2
59	8.907 1210	8.908 6929	8.910 2592	8.911 8200	8.913 3753	8.914 9251	1
60	8.907 1472	8.908 7190	8.910 2853	8.911 8460	8.913 4012	8.914 9509	0
″	23′	22′	21′	20′	19′	18′	″

cotg 85°

sin 4°

″	42′	43′	44′	45′	46′	47′	″
0	8.913 4881	8.915 0219	8.916 5504	8.918 0734	8.919 5911	8.921 1034	60
1	8.913 5137	8.915 0474	8.916 5758	8.918 0987	8.919 6163	8.921 1286	59
2	8.913 5393	8.915 0730	8.916 6012	8.918 1241	8.919 6416	8.921 1537	58
3	8.913 5649	8.915 0985	8.916 6266	8.918 1494	8.919 6668	8.921 1789	57
4	8.913 5905	8.915 1240	8.916 6521	8.918 1747	8.919 6920	8.921 2040	56
5	8.913 6161	8.915 1495	8.916 6775	8.918 2001	8.919 7173	8.921 2292	55
6	8.913 6417	8.915 1750	8.916 7029	8.918 2254	8.919 7425	8.921 2544	54
7	8.913 6673	8.915 2005	8.916 7283	8.918 2507	8.919 7678	8.921 2795	53
8	8.913 6929	8.915 2260	8.916 7537	8.918 2760	8.919 7930	8.921 3047	52
9	8.913 7185	8.915 2515	8.916 7791	8.918 3014	8.919 8182	8.921 3208	51
10	8.913 7441	8.915 2770	8.916 8046	8.918 3267	8.919 8435	8.921 3550	50
11	8.913 7697	8.915 3025	8.916 8300	8.918 3520	8.919 8687	8.921 3801	49
12	8.913 7953	8.915 3280	8.916 8554	8.918 3773	8.919 8940	8.921 4052	48
13	8.913 8209	8.915 3535	8.916 8808	8.918 4027	8.919 9192	8.921 4304	47
14	8.913 8464	8.915 3790	8.916 9062	8.918 4280	8.919 9444	8.921 4555	46
15	8.913 8720	8.915 4045	8.916 9316	8.918 4533	8.919 9696	8.921 4807	45
16	8.913 8976	8.915 4300	8.916 9570	8.918 4786	8.919 9949	8.921 5058	44
17	8.913 9232	8.915 4555	8.916 9824	8.918 5039	8.920 0201	8.921 5309	43
18	8.913 9488	8.915 4810	8.917 0078	8.918 5292	8.920 0453	8.921 5561	42
19	8.913 9744	8.915 5065	8.917 0332	8.918 5546	8.920 0705	8.921 5812	41
20	8.913 9999	8.915 5320	8.917 0586	8.918 5799	8.920 0958	8.921 6064	40
21	8.914 0255	8.915 5575	8.917 0840	8.918 6052	8.920 1210	8.921 6315	39
22	8.914 0511	8.915 5830	8.917 1094	8.918 6305	8.920 1462	8.921 6566	38
23	8.914 0767	8.915 6085	8.917 1348	8.918 6558	8.920 1714	8.921 6817	37
24	8.914 1023	8.915 6339	8.917 1602	8.918 6811	8.920 1966	8.921 7069	36
25	8.914 1278	8.915 6594	8.917 1856	8.918 7064	8.920 2218	8.921 7320	35
26	8.914 1534	8.915 6849	8.917 2110	8.918 7317	8.920 2471	8.921 7571	34
27	8.914 1790	8.915 7104	8.917 2364	8.918 7570	8.920 2723	8.921 7822	33
28	8.914 2045	8.915 7359	8.917 2618	8.918 7823	8.920 2975	8.921 8074	32
29	8.914 2301	8.915 7613	8.917 2872	8.918 8076	8.920 3227	8.921 8325	31
30	8.914 2557	8.915 7868	8.917 3125	8.918 8329	8.920 3479	8.921 8576	30
31	8.914 2812	8.915 8123	8.917 3379	8.918 8582	8.920 3731	8.921 8827	29
32	8.914 3068	8.915 8378	8.917 3633	8.918 8835	8.920 3983	8.921 9078	28
33	8.914 3324	8.915 8632	8.917 3887	8.918 9088	8.920 4235	8.921 9329	27
34	8.914 3579	8.915 8887	8.917 4141	8.918 9341	8.920 4487	8.921 9581	26
35	8.914 3835	8.915 9142	8.917 4394	8.918 9593	8.920 4739	8.921 9832	25
36	8.914 4090	8.915 9396	8.917 4648	8.918 9846	8.920 4991	8.922 0083	24
37	8.914 4346	8.915 9651	8.917 4902	8.919 0099	8.920 5243	8.922 0334	23
38	8.914 4601	8.915 9906	8.917 5156	8.919 0352	8.920 5495	8.922 0585	22
39	8.914 4857	8.916 0160	8.917 5409	8.919 0605	8.920 5747	8.922 0836	21
40	8.914 5112	8.916 0415	8.917 5663	8.919 0858	8.920 5999	8.922 1087	20
41	8.914 5368	8.916 0669	8.917 5917	8.919 1110	8.920 6251	8.922 1338	19
42	8.914 5623	8.916 0924	8.917 6170	8.919 1363	8.920 6503	8.922 1589	18
43	8.914 5879	8.916 1178	8.917 6424	8.919 1616	8.920 6754	8.922 1840	17
44	8.914 6134	8.916 1433	8.917 6678	8.919 1869	8.920 7006	8.922 2091	16
45	8.914 6390	8.916 1688	8.917 6931	8.919 2121	8.920 7258	8.922 2342	15
46	8.914 6645	8.916 1942	8.917 7185	8.919 2374	8.920 7510	8.922 2593	14
47	8.914 6900	8.916 2196	8.917 7438	8.919 2627	8.920 7762	8.922 2844	13
48	8.914 7156	8.916 2451	8.917 7692	8.919 2880	8.920 8014	8.922 3095	12
49	8.914 7411	8.916 2705	8.917 7946	8.919 3132	8.920 8265	8.922 3346	11
50	8.914 7667	8.916 2960	8.917 8199	8.919 3385	8.920 8517	8.922 3597	10
51	8.914 7922	8.916 3214	8.917 8453	8.919 3637	8.920 8769	8.922 3848	9
52	8.914 8177	8.916 3469	8.917 8706	8.919 3890	8.920 9021	8.922 4098	8
53	8.914 8433	8.916 3723	8.917 8960	8.919 4143	8.920 9272	8.922 4349	7
54	8.914 8688	8.916 3978	8.917 9213	8.919 4395	8.920 9524	8.922 4600	6
55	8.914 8943	8.916 4232	8.917 9467	8.919 4648	8.920 9776	8.922 4851	5
56	8.914 9198	8.916 4486	8.917 9720	8.919 4900	8.921 0028	8.922 5102	4
57	8.914 9454	8.916 4741	8.917 9974	8.919 5153	8.921 0279	8.922 5352	3
58	8.914 9709	8.916 4995	8.918 0227	8.919 5406	8.921 0531	8.922 5603	2
59	8.914 9964	8.916 5249	8.918 0480	8.919 5658	8.921 0782	8.922 5854	1
60	8.915 0219	8.916 5504	8.918 0734	8.919 5911	8.921 1034	8.922 6105	0
″	17′	16′	15′	14′	13′	12′	″

cos 85°

″	42′	43′	44′	45′	46′	47′	″
0	8.914 9509	8.916 4952	8.918 0340	8.919 5675	8.921 0957	8.922 6186	60
1	8.914 9767	8.916 5208	8.918 0596	8.919 5930	8.921 1211	8.922 6440	59
2	8.915 0024	8 916 5465	8.918 0852	8.919 6186	8.921 1466	8.922 6693	58
3	8.915 0282	8 916 5722	8.918 1108	8.919 6441	8.921 1720	8.922 6946	57
4	8.915 0540	8.916 5979	8.918 1364	8.919 6696	8.921 1974	8.922 7200	56
5	8.915 0798	8.916 6236	8.918 1620	8.919 6951	8.921 2228	8.922 7453	55
6	8.915 1056	8.916 6493	8.918 1876	8.919 7206	8.921 2483	8.922 7706	54
7	8.915 1313	8.916 6750	8.918 2132	8.919 7461	8.921 2737	8.922 7960	53
8	8.915 1571	8.916 7006	8.918 2388	8.919 7716	8.921 2991	8.922 8213	52
9	8.915 1829	8.916 7263	8.918 2644	8.919 7971	8.921 3245	8.922 8466	51
10	8.915 2086	8.916 7520	8.918 2900	8.919 8226	8.921 3499	8.922 8719	50
11	8.915 2344	8.916 7777	8.918 3156	8.919 8481	8.921 3753	8.922 8973	49
12	8.915 2602	8.916 8034	8.918 3412	8.919 8736	8.921 4007	8.922 9226	48
13	8.915 2859	8.916 8290	8.918 3667	8.919 8991	8.921 4261	8.922 9479	47
14	8.915 3117	8.916 8547	8.918 3923	8.919 9246	8.921 4515	8.922 9732	46
15	8.915 3375	8.916 8804	8.918 4179	8.919 9501	8.921 4769	8.922 9985	45
16	8.915 3632	8.916 9060	8.918 4435	8.919 9756	8.921 5023	8.923 0239	44
17	8.915 3890	8.916 9317	8.918 4691	8.920 0011	8.921 5277	8.923 0492	43
18	8.915 4147	8.916 9574	8.918 4946	8.920 0265	8.921 5531	8.923 0745	42
19	8.915 4405	8.916 9830	8.918 5202	8.920 0520	8.921 5785	8.923 0998	41
20	8.915 4662	8.917 0087	8.918 5458	8.920 0775	8.921 6039	8.923 1251	40
21	8.915 4920	8.917 0344	8.918 5714	8.920 1030	8.921 6293	8.923 1504	39
22	8.915 5177	8.917 0600	8.918 5969	8.920 1285	8.921 6547	8.923 1757	38
23	8.915 5435	8.917 0857	8.918 6225	8.920 1540	8.921 6801	8.923 2010	37
24	8.915 5692	8.917 1113	8.918 6481	8.920 1794	8.921 7055	8.923 2263	36
25	8.915 5950	8.917 1370	8.918 6736	8.920 2049	8.921 7309	8.923 2516	35
26	8.915 6207	8.917 1627	8.918 6992	8.920 2304	8.921 7563	8.923 2769	34
27	8.915 6465	8.917 1883	8.918 7248	8.920 2559	8.921 7817	8.923 3022	33
28	8.915 6722	8.917 2140	8.918 7503	8.920 2813	8.921 8071	8.923 3275	32
29	8.915 6980	8.917 2396	8.918 7759	8.920 3068	8.921 8325	8.923 3528	31
30	8.915 7237	8.917 2653	8.918 8014	8.920 3323	8.921 8578	8.923 3781	30
31	8.915 7494	8.917 2909	8.918 8270	8.920 3578	8.921 8832	8.923 4034	29
32	8.915 7752	8.917 3166	8.918 8526	8.920 3832	8.921 9086	8.923 4287	28
33	8.915 8009	8.917 3422	8.918 8781	8.920 4087	8.921 9340	8.923 4540	27
34	8.915 8266	8.917 3678	8.918 9037	8.920 4342	8.921 9594	8.923 4793	26
35	8.915 8524	8.917 3935	8.918 9292	8.920 4596	8.921 9847	8.923 5046	25
36	8.915 8781	8.917 4191	8.918 9548	8.920 4851	8.922 0101	8.923 5299	24
37	8.915 9038	8.917 4448	8.918 9803	8.920 5105	8.922 0355	8.923 5551	23
38	8.915 9295	8.917 4704	8.919 0059	8.920 5360	8.922 0608	8.923 5804	22
39	8.915 9553	8.917 4960	8.919 0314	8.920 5615	8.922 0862	8.923 6057	21
40	8.915 9810	8.917 5217	8.919 0570	8.920 5869	8.922 1116	8.923 6310	20
41	8.916 0067	8.917 5473	8.919 0825	8.920 6124	8.922 1369	8.923 6563	19
42	8.916 0324	8.917 5729	8.919 1080	8.920 6378	8.922 1623	8.923 6815	18
43	8.916 0582	8.917 5986	8.919 1336	8.920 6633	8.922 1877	8.923 7068	17
44	8.916 0839	8.917 6242	8.919 1591	8.920 6887	8.922 2130	8.923 7321	16
45	8.916 1096	8.917 6498	8.919 1847	8.920 7142	8.922 2384	8.923 7574	15
46	8.916 1353	8.917 6754	8.919 2102	8.920 7396	8.922 2638	8.923 7826	14
47	8.916 1610	8.917 7011	8.919 2357	8.920 7651	8.922 2891	8.923 8079	13
48	8.916 1867	8.917 7267	8.919 2613	8.920 7905	8.922 3145	8.923 8332	12
49	8.916 2124	8.917 7523	8.919 2868	8.920 8160	8.922 3398	8.923 8584	11
50	8.916 2381	8.917 7779	8.919 3123	8.920 8414	8.922 3652	8.923 8837	10
51	8.916 2639	8.917 8035	8.919 3378	8.920 8668	8.922 3905	8.923 9090	9
52	8.916 2896	8.917 8291	8.919 3634	8.920 8923	8.922 4159	8.923 9342	8
53	8.916 3153	8.917 8548	8.919 3889	8.920 9177	8.922 4412	8.923 9595	7
54	8.916 3410	8.917 8804	8.919 4144	8.920 9431	8.922 4666	8.923 9848	6
55	8.916 3667	8.917 9060	8.919 4399	8.920 9686	8.922 4919	8.924 0100	5
56	8.916 3924	8.917 9316	8.919 4655	8.920 9940	8.922 5173	8.924 0353	4
57	8.916 4181	8.917 9572	8.919 4910	8.921 0194	8.922 5426	8.924 0605	3
58	8.916 4438	8.917 9828	8.919 5165	8.921 0449	8.922 5680	8.924 0858	2
59	8.916 4695	8.918 0084	8.919 5420	8.921 0703	8.922 5933	8.924 1110	1
60	8.916 4952	8.918 0340	8.919 5675	8.921 0957	8.922 6186	8.924 1363	0
″	17′	16′	15′	14′	13′	12′	″

sin 4°

″	48′	49′	50′	51′	52′	53′	″
0	8.922 6105	8.924 1123	8.925 6089	8.927 1003	8.928 5866	8.930 0678	60
1	8.922 6356	8.924 1373	8.925 6338	8.927 1251	8.928 6114	8.930 0925	59
2	8.922 6606	8.924 1623	8.925 6587	8.927 1500	8.928 6361	8.930 1171	58
3	8.922 6857	8.924 1873	8.925 6836	8.927 1748	8.928 6608	8.930 1417	57
4	8.922 7108	8.924 2122	8.925 7085	8.927 1996	8.928 6855	8.930 1664	56
5	8.922 7358	8.924 2372	8.925 7334	8.927 2244	8.928 7103	8.930 1910	55
6	8.922 7609	8.924 2622	8.925 7583	8.927 2492	8.928 7350	8.930 2156	54
7	8.922 7860	8.924 2872	8.925 7832	8.927 2740	8.928 7597	8.930 2403	53
8	8.922 8110	8.924 3121	8.925 8081	8.927 2988	8.928 7844	8.930 2649	52
9	8.922 8361	8.924 3371	8.925 8329	8.927 3236	8.928 8091	8.930 2895	51
10	8.922 8611	8.924 3621	8.925 8578	8.927 3484	8.928 8338	8.930 3142	50
11	8.922 8862	8.924 3871	8.925 8827	8.927 3732	8.928 8586	8.930 3388	49
12	8.922 9113	8.924 4120	8.925 9076	8.927 3980	8.928 8833	8.930 3634	48
13	8.922 9363	8.924 4370	8.925 9325	8.927 4228	8.928 9080	8.930 3881	47
14	8.922 9614	8.924 4620	8.925 9574	8.927 4476	8.928 9327	8.930 4127	46
15	8.922 9864	8.924 4869	8.925 9822	8.927 4724	8.928 9574	8.930 4373	45
16	8.923 0115	8.924 5119	8.926 0071	8.927 4972	8.928 9821	8.930 4619	44
17	8.923 0365	8.924 5369	8.926 0320	8.927 5220	8.929 0068	8.930 4866	43
18	8.923 0616	8.924 5618	8.926 0569	8.927 5468	8.929 0315	8.930 5112	42
19	8.923 0866	8.924 5868	8.926 0817	8.927 5715	8.929 0562	8.930 5358	41
20	8.923 1117	8.924 6117	8.926 1066	8.927 5963	8.929 0809	8.930 5604	40
21	8.923 1367	8.924 6367	8.926 1315	8.927 6211	8.929 1056	8.930 5850	39
22	8.923 1618	8.924 6617	8.926 1564	8.927 6459	8.929 1303	8.930 6096	38
23	8.923 1868	8.924 6866	8.926 1812	8.927 6707	8.929 1550	8.930 6343	37
24	8.923 2118	8.924 7116	8.926 2061	8.927 6955	8.929 1797	8.930 6589	36
25	8.923 2369	8.924 7365	8.926 2310	8.927 7202	8.929 2044	8.930 6835	35
26	8.923 2619	8.924 7615	8.926 2558	8.927 7450	8.929 2291	8.930 7081	34
27	8.923 2869	8.924 7864	8.926 2807	8.927 7698	8.929 2538	8.930 7327	33
28	8.923 3120	8.924 8114	8.926 3055	8.927 7946	8.929 2785	8.930 7573	32
29	8.923 3370	8.924 8363	8.926 3304	8.927 8193	8.929 3032	8.930 7819	31
30	8.923 3620	8.924 8613	8.926 3553	8.927 8441	8.929 3279	8.930 8065	30
31	8.923 3871	8.924 8862	8.926 3801	8.927 8689	8.929 3525	8.930 8311	29
32	8.923 4121	8.924 9111	8.926 4050	8.927 8937	8.929 3772	8.930 8557	28
33	8.923 4371	8.924 9361	8.926 4298	8.927 9184	8.929 4019	8.930 8803	27
34	8.923 4622	8.924 9610	8.926 4547	8.927 9432	8.929 4266	8.930 9049	26
35	8.923 4872	8.924 9859	8.926 4795	8.927 9680	8.929 4513	8.930 9295	25
36	8.923 5122	8.925 0109	8.926 5044	8.927 9927	8.929 4759	8.930 9541	24
37	8.923 5372	8.925 0358	8.926 5292	8.928 0175	8.929 5006	8.930 9787	23
38	8.923 5622	8.925 0608	8.926 5541	8.928 0422	8.929 5253	8.931 0033	22
39	8.923 5873	8.925 0857	8.926 5789	8.928 0670	8.929 5500	8.931 0279	21
40	8.923 6123	8.925 1106	8.926 6038	8.928 0918	8.929 5746	8.931 0524	20
41	8.923 6373	8.925 1355	8.926 6286	8.928 1165	8.929 5993	8.931 0770	19
42	8.923 6623	8.925 1605	8.926 6534	8.928 1413	8.929 6240	8.931 1016	18
43	8.923 6873	8.925 1854	8.926 6783	8.928 1660	8.929 6487	8.931 1262	17
44	8.923 7123	8.925 2103	8.926 7031	8.928 1908	8.929 6733	8.931 1508	16
45	8.923 7373	8.925 2352	8.926 7280	8.928 2155	8.929 6980	8.931 1754	15
46	8.923 7623	8.925 2602	8.926 7528	8.928 2403	8.929 7227	8.931 1999	14
47	8.923 7873	8.925 2851	8.926 7776	8.928 2650	8.929 7473	8.931 2245	13
48	8.923 8124	8.925 3100	8.926 8025	8.928 2898	8.929 7720	8.931 2491	12
49	8.923 8374	8.925 3349	8.926 8273	8.928 3145	8.929 7966	8.931 2737	11
50	8.923 8624	8.925 3598	8.926 8521	8.928 3393	8.929 8213	8.931 2983	10
51	8.923 8874	8.925 3847	8.926 8769	8.928 3640	8.929 8460	8.931 3228	9
52	8.923 9124	8.925 4097	8.926 9018	8.928 3887	8.929 8706	8.931 3474	8
53	8.923 9374	8.925 4346	8.926 9266	8.928 4135	8.929 8953	8.931 3720	7
54	8.923 9624	8.925 4595	8.926 9514	8.928 4382	8.929 9199	8.931 3965	6
55	8.923 9873	8.925 4844	8.926 9762	8.928 4630	8.929 9446	8.931 4211	5
56	8.924 0123	8.925 5093	8.927 0011	8.928 4877	8.929 9692	8.931 4457	4
57	8.924 0373	8.925 5342	8.927 0259	8.928 5124	8.929 9939	8.931 4702	3
58	8.924 0623	8.925 5591	8.927 0507	8.928 5372	8.930 0185	8.931 4948	2
59	8.924 0873	8.925 5840	8.927 0755	8.928 5619	8.930 0432	8.931 5194	1
60	8.924 1123	8.925 6089	8.927 1003	8.928 5866	8.930 0678	8.931 5439	0
″	11′	10′	9′	8′	7′	6′	″

cos 85°

tang 4°

″	48′	49′	50′	51′	52′	53′	″
0	8.924 1363	8.925 6487	8.927 1560	8.928 6581	8.930 1552	8.931 6471	60
1	8.924 1615	8.925 6739	8.927 1811	8.928 6831	8.930 1801	8.931 6719	59
2	8.924 1868	8.925 6991	8.927 2062	8.928 7081	8.930 2050	8.931 6968	58
3	8.924 2120	8.925 7242	8.927 2312	8.928 7331	8.930 2299	8.931 7216	57
4	8.924 2373	8.925 7494	8.927 2563	8.928 7581	8.930 2548	8.931 7464	56
5	8.924 2625	8.925 7745	8.927 2814	8.928 7831	8.930 2797	8.931 7712	55
6	8.924 2878	8.925 7997	8.927 3064	8.928 8081	8.930 3046	8.931 7960	54
7	8.924 3130	8.925 8248	8.927 3315	8.928 8331	8.930 3295	8.931 8209	53
8	8.924 3382	8.925 8500	8.927 3566	8.928 8580	8.930 3544	8.931 8457	52
9	8.924 3635	8.925 8752	8.927 3817	8.928 8830	8.930 3793	8.931 8705	51
10	8.924 3887	8.925 9003	8.927 4067	8.928 9080	8.930 4042	8.931 8953	50
11	8.924 4140	8.925 9255	8.927 4318	8.928 9330	8.930 4291	8.931 9201	49
12	8.924 4392	8.925 9506	8.927 4568	8.928 9579	8.930 4540	8.931 9449	48
13	8.924 4644	8.925 9757	8.927 4819	8.928 9829	8.930 4789	8.931 9697	47
14	8.924 4897	8.926 0009	8.927 5070	8.929 0079	8.930 5037	8.931 9945	46
15	8.924 5149	8.926 0260	8.927 5320	8.929 0329	8.930 5286	8.932 0193	45
16	8.924 5401	8.926 0512	8.927 5571	8.929 0578	8.930 5535	8.932 0441	44
17	8.924 5653	8.926 0763	8.927 5821	8.929 0828	8.930 5784	8.932 0689	43
18	8.924 5906	8.926 1015	8.927 6072	8.929 1078	8.930 6033	8.932 0937	42
19	8.924 6158	8.926 1266	8.927 6322	8.929 1327	8.930 6282	8.932 1185	41
20	8.924 6410	8.926 1517	8.927 6573	8.929 1577	8.930 6530	8.932 1433	40
21	8.924 6662	8.926 1769	8.927 6823	8.929 1827	8.930 6779	8.932 1681	39
22	8.924 6915	8.926 2020	8.927 7074	8.929 2076	8.930 7028	8.932 1929	38
23	8.924 7167	8.926 2271	8.927 7324	8.929 2326	8.930 7277	8.932 2177	37
24	8.924 7419	8.926 2523	8.927 7575	8.929 2576	8.930 7526	8.932 2425	36
25	8.924 7671	8.926 2774	8.927 7825	8.929 2825	8.930 7774	8.932 2673	35
26	8.924 7923	8.926 3025	8.927 8076	8.929 3075	8.930 8023	8.932 2921	34
27	8.924 8175	8.926 3276	8.927 8326	8.929 3324	8.930 8272	8.932 3169	33
28	8.924 8427	8.926 3528	8.927 8576	8.929 3574	8.930 8520	8.932 3416	32
29	8.924 8680	8.926 3779	8.927 8827	8.929 3823	8.930 8769	8.932 3664	31
30	8.924 8932	8.926 4030	8.927 9077	8.929 4073	8.930 9018	8.932 3912	30
31	8.924 9184	8.926 4281	8.927 9327	8.929 4322	8.930 9266	8.932 4160	29
32	8.924 9436	8.926 4533	8.927 9578	8.929 4572	8.930 9515	8.932 4408	28
33	8.924 9688	8.926 4784	8.927 9828	8.929 4821	8.930 9764	8.932 4656	27
34	8.924 9940	8.926 5035	8.928 0078	8.929 5071	8.931 0012	8.932 4903	26
35	8.925 0192	8.926 5286	8.928 0329	8.929 5320	8.931 0261	8.932 5151	25
36	8.925 0444	8.926 5537	8.928 0579	8.929 5570	8.931 0509	8.932 5399	24
37	8.925 0696	8.926 5788	8.928 0829	8.929 5819	8.931 0758	8.932 5647	23
38	8.925 0948	8.926 6039	8.928 1079	8.929 6068	8.931 1007	8.932 5894	22
39	8.925 1200	8.926 6290	8.928 1330	8.929 6318	8.931 1255	8.932 6142	21
40	8.925 1452	8.926 6542	8.928 1580	8.929 6567	8.931 1504	8.932 6390	20
41	8.925 1704	8.926 6793	8.928 1830	8.929 6817	8.931 1752	8.932 6637	19
42	8.925 1955	8.926 7044	8.928 2080	8.929 7066	8.931 2001	8.932 6885	18
43	8.925 2207	8.926 7295	8 928 2331	8.929 7315	8.931 2249	8.932 7133	17
44	8.925 2459	8.926 7546	8.928 2581	8.929 7565	8.931 2498	8.932 7380	16
45	8.925 2711	8.926 7797	8.928 2831	8.929 7814	8.931 2746	8.932 7628	15
46	8.925 2963	8.926 8048	8.928 3081	8.929 8063	8.931 2995	8.932 7875	14
47	8.925 3215	8.926 8299	8.928 3331	8.929 8312	8.931 3243	8.932 8123	13
48	8.925 3467	8.926 8550	8.928 3581	8.929 8562	8.931 3491	8.932 8371	12
49	8.925 3718	8.926 8801	8.928 3831	8.929 8811	8.931 3740	8.932 8618	11
50	8.925 3970	8.926 9052	8.928 4081	8.929 9060	8.931 3988	8.932 8866	10
51	8.925 4222	8.926 9302	8.928 4331	8.929 9309	8.931 4237	8.932 9113	9
52	8.925 4474	8.926 9553	8.928 4581	8.929 9559	8.931 4485	8.932 9361	8
53	8.925 4725	8.926 9804	8.928 4832	8.929 9808	8.931 4733	8.932 9608	7
54	8.925 4977	8.927 0055	8.928 5082	8.930 0057	8.931 4982	8.932 9856	6
55	8.925 5229	8.927 0306	8.928 5332	8.930 0306	8.931 5230	8.933 0103	5
56	8.925 5481	8.927 0557	8.928 5582	8.930 0555	8.931 5478	8.933 0351	4
57	8.925 5732	8.927 0808	8.928 5832	8.930 0804	8.931 5726	8.933 0598	3
58	8.925 5984	8.927 1058	8.928 6081	8.930 1053	8.931 5975	8.933 0846	2
59	8.925 6236	8.927 1309	8.928 6331	8.930 1303	8.931 6223	8.933 1093	1
60	8.925 6487	8.927 1560	8.928 6581	8.930 1552	8.931 6471	8.933 1340	0
″	11′	10′	9′	8′	7′	6′	″

cotg 85°

sin 4°

″	54′	55′	56′	57′	58′	59′	″
0	8.931 5439	8.933 0150	8.934 4811	8.935 9422	8.937 3983	8.938 8496	60
1	8.931 5685	8.933 0395	8.934 5055	8.935 9665	8.937 4226	8.938 8738	59
2	8.931 5930	8.933 0639	8.934 5299	8.935 9908	8.937 4468	8.938 8979	58
3	8.931 6176	8.933 0884	8.934 5542	8.936 0151	8.937 4710	8.938 9220	57
4	8.931 6422	8.933 1129	8.934 5786	8.936 0394	8.937 4952	8.938 9462	56
5	8.931 6667	8.933 1374	8.934 6030	8.936 0637	8.937 5195	8.938 9703	55
6	8.931 6913	8.933 1618	8.934 6274	8.936 0880	8.937 5437	8.938 9945	54
7	8.931 7158	8.933 1863	8.934 6518	8.936 1123	8.937 5679	8.939 0186	53
8	8.931 7404	8.933 2108	8.934 6762	8.936 1366	8.937 5921	8.939 0427	52
9	8.931 7649	8.933 2352	8.934 7006	8.936 1609	8.937 6163	8.939 0669	51
10	8.931 7895	8.933 2597	8.934 7249	8.936 1852	8.937 6406	8.939 0910	50
11	8.931 8140	8.933 2842	8.934 7493	8.936 2095	8.937 6648	8.939 1151	49
12	8.931 8385	8.933 3086	8.934 7737	8.936 2338	8.937 6890	8.939 1393	48
13	8.931 8631	8.933 3331	8.934 7981	8.936 2581	8.937 7132	8.939 1634	47
14	8.931 8876	8.933 3575	8.934 8224	8.936 2824	8.937 7374	8.939 1875	46
15	8.931 9122	8.933 3820	8.934 8468	8.936 3067	8.937 7616	8.939 2117	45
16	8.931 9367	8.933 4064	8.934 8712	8.936 3310	8.937 7858	8.939 2358	44
17	8.931 9612	8.933 4309	8.934 8956	8.936 3553	8.937 8100	8.939 2599	43
18	8.931 9858	8.933 4553	8.934 9199	8.936 3795	8.937 8342	8.939 2840	42
19	8.932 0103	8.933 4798	8.934 9443	8.936 4038	8.937 8584	8.939 3082	41
20	8.932 0348	8.933 5042	8.934 9687	8.936 4281	8.937 8826	8.939 3323	40
21	8.932 0594	8.933 5287	8.934 9930	8.936 4524	8.937 9068	8.939 3564	39
22	8.932 0839	8.933 5531	8.935 0174	8.936 4767	8.937 9310	8.939 3805	38
23	8.932 1084	8.933 5776	8.935 0417	8.936 5010	8.937 9552	8.939 4046	37
24	8.932 1330	8.933 6020	8.935 0661	8.936 5252	8.937 9794	8.939 4288	36
25	8.932 1575	8.933 6265	8.935 0905	8.936 5495	8.938 0036	8.939 4529	35
26	8.932 1820	8.933 6509	8.935 1148	8.936 5738	8.938 0278	8.939 4770	34
27	8.932 2065	8.933 6753	8.935 1392	8.936 5981	8.938 0520	8.939 5011	33
28	8.932 2311	8.933 6998	8.935 1635	8.936 6223	8.938 0762	8.939 5252	32
29	8.932 2556	8.933 7242	8.935 1879	8.936 6466	8.938 1004	8.939 5493	31
30	8.932 2801	8.933 7487	8.935 2122	8.936 6709	8.938 1246	8.939 5734	30
31	8.932 3046	8.933 7731	8.935 2366	8.936 6951	8.938 1488	8.939 5975	29
32	8.932 3291	8.933 7975	8.935 2609	8.936 7194	8.938 1730	8.939 6216	28
33	8.932 3536	8.933 8220	8.935 2853	8.936 7437	8.938 1971	8.939 6457	27
34	8.932 3781	8.933 8464	8.935 3096	8.936 7679	8.938 2213	8.939 6698	26
35	8.932 4027	8.933 8708	8.935 3340	8.936 7922	8.938 2455	8.939 6939	25
36	8.932 4272	8.933 8952	8.935 3583	8.936 8165	8.938 2697	8.939 7180	24
37	8.932 4517	8.933 9197	8.935 3827	8.936 8407	8.938 2939	8.939 7421	23
38	8.932 4762	8.933 9441	8.935 4070	8.936 8650	8.938 3180	8.939 7662	22
39	8.932 5007	8.933 9685	8.935 4314	8.936 8892	8.938 3422	8.939 7903	21
40	8.932 5252	8.933 9929	8.935 4557	8.936 9135	8.938 3664	8.939 8144	20
41	8.932 5497	8.934 0174	8.935 4800	8.936 9378	8.938 3906	8.939 8385	19
42	8.932 5742	8.934 0418	8.935 5044	8.936 9620	8.938 4147	8.939 8626	18
43	8.932 5987	8.934 0662	8.935 5287	8.936 9863	8.938 4389	8.939 8867	17
44	8.932 6232	8.934 0906	8.935 5530	8.937 0105	8.938 4631	8.939 9108	16
45	8.932 6477	8.934 1150	8.935 5774	8.937 0348	8.938 4873	8.939 9349	15
46	8.932 6722	8.934 1394	8.935 6017	8.937 0590	8.938 5114	8.939 9589	14
47	8.932 6967	8.934 1638	8.935 6260	8.937 0833	8.938 5356	8.939 9830	13
48	8.932 7212	8.934 1883	8.935 6504	8.937 1075	8.938 5597	8.940 0071	12
49	8.932 7457	8.934 2127	8.935 6747	8.937 1318	8.938 5839	8.940 0312	11
50	8.932 7702	8.934 2371	8.935 6990	8.937 1560	8.938 6081	8.940 0553	10
51	8.932 7947	8.934 2615	8.935 7233	8.937 1802	8.938 6322	8.940 0794	9
52	8.932 8191	8.934 2859	8.935 7476	8.937 2045	8.938 6564	8.940 1034	8
53	8.932 8436	8.934 3103	8.935 7720	8.937 2287	8.938 6805	8.940 1275	7
54	8.932 8681	8.934 3347	8.935 7963	8.937 2530	8.938 7047	8.940 1516	6
55	8.932 8926	8.934 3591	8.935 8206	8.937 2772	8.938 7289	8.940 1757	5
56	8.932 9171	8.934 3835	8.935 8449	8.937 3014	8.938 7530	8.940 1997	4
57	8.932 9416	8.934 4079	8.935 8692	8.937 3257	8.938 7772	8.940 2238	3
58	8.932 9660	8.934 4323	8.935 8936	8.937 3499	8.938 8013	8.940 2479	2
59	8.932 9905	8.934 4567	8.935 9179	8.937 3741	8.938 8255	8.940 2719	1
60	8.933 0150	8.934 4811	8.935 9422	8.937 3983	8.938 8496	8.940 2960	0
″	5′	4′	3′	2′	1′	0′	″

cos 85°

tang 4°

″	54′	55′	56′	57′	58′	59′	″
0	8.933 1340	8.934 6160	8.936 0929	8.937 5650	8.939 0321	8.940 4944	60
1	8.933 1588	8.934 6406	8.936 1175	8.937 5895	8.939 0565	8.940 5187	59
2	8.933 1835	8.934 6653	8.936 1421	8.937 6139	8.939 0809	8.940 5430	58
3	8.933 2083	8.934 6899	8.936 1667	8.937 6384	8.939 1053	8.940 5673	57
4	8.933 2330	8.934 7146	8.936 1912	8.937 6629	8.939 1297	8.940 5917	56
5	8.933 2577	8.934 7392	8.936 2158	8.937 6874	8.939 1541	8.940 6160	55
6	8.933 2825	8.934 7639	8.936 2404	8.937 7119	8.939 1785	8.940 6403	54
7	8.933 3072	8.934 7885	8.936 2649	8.937 7364	8.939 2029	8.940 6646	53
8	8.933 3319	8.934 8132	8.936 2895	8.937 7609	8.939 2273	8.940 6890	52
9	8.933 3567	8.934 8378	8.936 3141	8.937 7853	8.939 2517	8.940 7133	51
10	8.933 3814	8.934 8625	8.936 3386	8.937 8098	8.939 2761	8.940 7376	50
11	8.933 4061	8.934 8871	8.936 3632	8.937 8343	8.939 3005	8.940 7619	49
12	8.933 4308	8.934 9118	8.936 3877	8.937 8588	8.939 3249	8.940 7862	48
13	8.933 4556	8.934 9364	8.936 4123	8.937 8833	8.939 3493	8.940 8105	47
14	8.933 4803	8.934 9610	8.936 4368	8.937 9077	8.939 3737	8.940 8349	46
15	8.933 5050	8.934 9857	8.936 4614	8.937 9322	8.939 3981	8.940 8592	45
16	8.933 5297	8.935 0103	8.936 4860	8.937 9567	8.939 4225	8.940 8835	44
17	8.933 5544	8.935 0349	8.936 5105	8.937 9811	8.939 4469	8.940 9078	43
18	8.933 5791	8.935 0596	8.936 5351	8.938 0056	8.939 4713	8.940 9321	42
19	8.933 6039	8.935 0842	8.936 5596	8.938 0301	8.939 4957	8.940 9564	41
20	8.933 6286	8.935 1088	8.936 5842	8.938 0545	8.939 5200	8.940 9807	40
21	8.933 6533	8.935 1335	8.936 6087	8.938 0790	8.939 5444	8.941 0050	39
22	8.933 6780	8.935 1581	8.936 6332	8.938 1035	8.939 5688	8.941 0293	38
23	8.933 7027	8.935 1827	8.936 6578	8.938 1279	8.939 5932	8.941 0536	37
24	8.933 7274	8.935 2074	8.936 6823	8.938 1524	8.939 6176	8.941 0779	36
25	8.933 7521	8.935 2320	8.936 7069	8.938 1769	8.939 6420	8.941 1022	35
26	8.933 7768	8.935 2566	8.936 7314	8.938 2013	8.939 6663	8.941 1265	34
27	8.933 8015	8.935 2812	8.936 7560	8.938 2258	8.939 6907	8.941 1508	33
28	8.933 8262	8.935 3058	8.936 7805	8.938 2502	8.939 7151	8.941 1751	32
29	8.933 8509	8.935 3305	8.936 8050	8.938 2747	8.939 7395	8.941 1994	31
30	8.933 8756	8.935 3551	8.936 8296	8.938 2991	8.939 7638	8.941 2237	30
31	8.933 9003	8.935 3797	8.936 8541	8.938 3236	8.939 7882	8.941 2480	29
32	8.933 9250	8.935 4043	8.936 8786	8.938 3480	8.939 8126	8.941 2722	28
33	8.933 9497	8.935 4289	8.936 9032	8.938 3725	8.939 8369	8.941 2965	27
34	8.933 9744	8.935 4535	8.936 9277	8.938 3969	8.939 8613	8.941 3208	26
35	8.933 9991	8.935 4781	8.936 9522	8.938 4214	8.939 8857	8.941 3451	25
36	8.934 0238	8.935 5027	8.936 9767	8.938 4458	8.939 9100	8.941 3694	24
37	8.934 0485	8.935 5274	8.937 0013	8.938 4703	8.939 9344	8.941 3937	23
38	8.934 0732	8.935 5520	8.937 0258	8.938 4947	8.939 9588	8.941 4180	22
39	8.934 0979	8.935 5766	8.937 0503	8.938 5191	8.939 9831	8.941 4422	21
40	8.934 1226	8.935 6012	8.937 0748	8.938 5436	8.940 0075	8.941 4665	20
41	8.934 1472	8.935 6258	8.937 0994	8.938 5680	8.940 0318	8.941 4908	19
42	8.934 1719	8.935 6504	8.937 1239	8.938 5925	8.940 0562	8.941 5151	18
43	8.934 1966	8.935 6750	8.937 1484	8.938 6169	8.940 0805	8.941 5393	17
44	8.934 2213	8.935 6996	8.937 1729	8.938 6413	8.940 1049	8.941 5636	16
45	8.934 2460	8.935 7242	8.937 1974	8.938 6658	8.940 1292	8.941 5879	15
46	8.934 2706	8.935 7488	8.937 2219	8.938 6902	8.940 1536	8.941 6121	14
47	8.934 2953	8.935 7733	8.937 2464	8.938 7146	8.940 1779	8.941 6364	13
48	8.934 3200	8.935 7979	8.937 2709	8.938 7391	8.940 2023	8.941 6607	12
49	8.934 3447	8.935 8225	8.937 2955	8.938 7635	8.940 2266	8.941 6849	11
50	8.934 3693	8.935 8471	8.937 3200	8.938 7879	8.940 2510	8.941 7092	10
51	8.934 3940	8.935 8717	8.937 3445	8.938 8123	8.940 2753	8.941 7335	9
52	8.934 4187	8.935 8963	8.937 3690	8.938 8368	8.940 2997	8.941 7577	8
53	8.934 4433	8.935 9209	8.937 3935	8.938 8612	8.940 3240	8.941 7820	7
54	8.934 4680	8.935 9455	8.937 4180	8.938 8856	8.940 3483	8.941 8063	6
55	8.934 4927	8.935 9700	8.937 4425	8.938 9100	8.940 3727	8.941 8305	5
56	8.934 5173	8.935 9946	8.937 4670	8.938 9344	8.940 3970	8.941 8548	4
57	8.934 5420	8.936 0192	8.937 4915	8.938 9588	8.940 4214	8.941 8790	3
58	8.934 5667	8.936 0438	8.937 5160	8.938 9833	8.940 4457	8.941 9033	2
59	8.934 5913	8.936 0684	8.937 5405	8.939 0077	8.940 4700	8.941 9275	1
60	8.934 6160	8.936 0929	8.937 5650	8.939 0321	8.940 4944	8.941 9518	0
″	5′	4′	3′	2′	1′	0′	″

cotg 85°

DEGREES.						MINUTES.		SECONDS.	
0°	0.000 0000	60°	1.047 1976	120°	2.094 3951	0′	0.000 0000	0″	0.000 0000
1	0.017 4533	61	1.064 6508	121	2.111 8484	1	0.000 2909	1	0.000 0048
2	0.034 9066	62	1.082 1041	122	2.129 3017	2	0.000 5818	2	0.000 0097
3	0.052 3599	63	1.099 5574	123	2.146 7550	3	0.000 8727	3	0.000 0145
4	0.069 8132	64	1.117 0107	124	2.164 2083	4	0.001 1636	4	0.000 0194
5	0.087 2665	65	1.134 4640	125	2.181 6616	5	0.001 4544	5	0.000 0242
6	0.104 7198	66	1.151 9173	126	2.199 1149	6	0.001 7453	6	0.000 0291
7	0.122 1730	67	1.169 3706	127	2.216 5682	7	0.002 0362	7	0.000 0339
8	0.139 6263	68	1.186 8239	128	2.234 0214	8	0.002 3271	8	0.000 0388
9	0.157 0796	69	1.204 2772	129	2.251 4747	9	0.002 6180	9	0.000 0436
10	0.174 5329	70	1.221 7305	130	2.268 9280	10	0.002 9089	10	0.000 0485
11	0.191 9862	71	1.239 1838	131	2.286 3813	11	0.003 1998	11	0.000 0533
12	0.209 4395	72	1.256 6371	132	2.303 8346	12	0.003 4907	12	0.000 0582
13	0.226 8928	73	1.274 0904	133	2.321 2879	13	0.003 7815	13	0.000 0630
14	0.244 3461	74	1.291 5436	134	2.338 7412	14	0.004 0724	14	0.000 0679
15	0.261 7994	75	1.308 9969	135	2.356 1945	15	0.004 3633	15	0.000 0727
16	0.279 2527	76	1.326 4502	136	2.373 6478	16	0.004 6542	16	0.000 0776
17	0.296 7060	77	1.343 9035	137	2.391 1011	17	0.004 9451	17	0.000 0824
18	0.314 1593	78	1.361 3568	138	2.408 5544	18	0.005 2360	18	0.000 0873
19	0.331 6126	79	1.378 8101	139	2.426 0077	19	0.005 5269	19	0.000 0921
20	0.349 0659	80	1.396 2634	140	2.443 4610	20	0.005 8178	20	0.000 0970
21	0.366 5191	81	1.413 7167	141	2.460 9142	21	0.006 1087	21	0.000 1018
22	0.383 9724	82	1.431 1700	142	2.478 3675	22	0.006 3995	22	0.000 1067
23	0.401 4257	83	1.448 6233	143	2.495 8208	23	0.006 6904	23	0.000 1115
24	0.418 8790	84	1.466 0766	144	2.513 2741	24	0.006 9813	24	0.000 1164
25	0.436 3323	85	1.483 5299	145	2.530 7274	25	0.007 2722	25	0.000 1212
26	0.453 7856	86	1.500 9832	146	2.548 1807	26	0.007 5631	26	0.000 1261
27	0.471 2389	87	1.518 4364	147	2.565 6340	27	0.007 8540	27	0.000 1309
28	0.488 6922	88	1.535 8897	148	2.583 0873	28	0.008 1449	28	0.000 1357
29	0.506 1455	89	1.553 3430	149	2.600 5406	29	0.008 4358	29	0.000 1406
30	0.523 5988	90	1.570 7963	150	2.617 9939	30	0.008 7266	30	0.000 1454
31	0.541 0521	91	1.588 2496	151	2.635 4472	31	0.009 0175	31	0.000 1503
32	0.558 5054	92	1.605 7029	152	2.652 9005	32	0.009 3084	32	0.000 1551
33	0.575 9587	93	1.623 1562	153	2.670 3538	33	0.009 5993	33	0.000 1600
34	0.593 4119	94	1.640 6095	154	2.687 8070	34	0.009 8902	34	0.000 1648
35	0.610 8652	95	1.658 0628	155	2.705 2603	35	0.010 1811	35	0.000 1697
36	0.628 3185	96	1.675 5161	156	2.722 7136	36	0.010 4720	36	0.000 1745
37	0.645 7718	97	1.692 9694	157	2.740 1669	37	0.010 7629	37	0.000 1794
38	0.663 2251	98	1.710 4227	158	2.757 6202	38	0.011 0538	38	0.000 1842
39	0.680 6784	99	1.727 8760	159	2.775 0735	39	0.011 3446	39	0.000 1891
40	0.698 1317	100	1.745 3293	160	2.792 5268	40	0.011 6355	40	0.000 1939
41	0.715 5850	101	1.762 7825	161	2.809 9801	41	0.011 9264	41	0.000 1988
42	0.733 0383	102	1.780 2358	162	2.827 4334	42	0.012 2173	42	0.000 2036
43	0.750 4916	103	1.797 6891	163	2.844 8867	43	0.012 5082	43	0.000 2085
44	0.767 9449	104	1.815 1424	164	2.862 3400	44	0.012 7991	44	0.000 2133
45	0.785 3982	105	1.832 5957	165	2.879 7933	45	0.013 0900	45	0.000 2182
46	0.802 8515	106	1.850 0490	166	2.897 2466	46	0.013 3809	46	0.000 2230
47	0.820 3047	107	1.867 5023	167	2.914 6999	47	0.013 6717	47	0.000 2279
48	0.837 7580	108	1.884 9556	168	2.932 1531	48	0.013 9626	48	0.000 2327
49	0.855 2113	109	1.902 4089	169	2.949 6064	49	0.014 2535	49	0.000 2376
50	0.872 6646	110	1.919 8622	170	2.967 0597	50	0.014 5444	50	0.000 2424
51	0.890 1179	111	1.937 3155	171	2.984 5130	51	0.014 8353	51	0.000 2473
52	0.907 5712	112	1.954 7688	172	3.001 9663	52	0.015 1262	52	0.000 2521
53	0.925 0245	113	1.972 2221	173	3.019 4196	53	0.015 4171	53	0.000 2570
54	0.942 4778	114	1.989 6753	174	3.036 8729	54	0.015 7080	54	0.000 2618
55	0.959 9311	115	2.007 1286	175	3.054 3262	55	0.015 9989	55	0.000 2666
56	0.977 3844	116	2.024 5819	176	3.071 7795	56	0.016 2897	56	0.000 2715
57	0.994 8377	117	2.042 0352	177	3.089 2328	57	0.016 5806	57	0.000 2763
58	1.012 2910	118	2.059 4885	178	3.106 6861	58	0.016 8715	58	0.000 2812
59	1.029 7443	119	2.076 9418	179	3.124 1394	59	0.017 1624	59	0.000 2860
60	1.047 1976	120	2.094 3951	180	3.141 5927	60	0.017 4533	60	0.000 2909

III.

LOGARITHMS

OF THE TRIGONOMETRICAL

FUNCTIONS

FROM TEN TO TEN SECONDS.

0°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	"	'
0	0						0.000 0000	0	60
	10	5.685 5749	3010300	5.685 5749	3010300	4.314 4251	0.000 0000	50	
	20	5.986 6049	1760912	5.986 6049	1760912	4.013 3951	0.000 0000	40	
	30	6.162 6961	1249388	6.162 6961	1249388	3.837 3039	0.000 0000	30	
	40	6.287 6349	969100	6.287 6349	969100	3.712 3651	0.000 0000	20	
	50	6.384 5449	791812	6.384 5449	791812	3.615 4551	0.000 0000	10	
1	0	6.463 7261	669468	6.463 7261	669468	3.536 2739	0.000 0000	0	59
	10	6.530 6729	579919	6.530 6729	579920	3.469 3271	0.000 0000	50	
	20	6.588 6648	511526	6.588 6649	511525	3.411 3351	0.000 0000	40	
	30	6.639 8174	457574	6.639 8174	457575	3.360 1826	0.000 0000	30	
	40	6.685 5748	413927	6.685 5749	413927	3.314 4251	9.999 9999	20	
	50	6.726 9675	377886	6.726 9676	377886	3.273 0324	9.999 9999	10	
2	0	6.764 7561	347621	6.764 7562	347621	3.235 2438	9.999 9999	0	58
	10	6.799 5182	321847	6.799 5183	321847	3.200 4817	9.999 9999	50	
	20	6.831 7029	299632	6.831 7030	299632	3.168 2970	9.999 9999	40	
	30	6.861 6661	280287	6.861 6662	280287	3.138 3338	9.999 9999	30	
	40	6.889 6948	263289	6.889 6949	263290	3.110 3051	9.999 9999	20	
	50	6.916 0237	248236	6.916 0239	248236	3.083 9761	9.999 9999	10	
3	0	6.940 8473	234811	6.940 8475	234811	3.059 1525	9.999 9998	0	57
	10	6.964 3284	222764	6.964 3286	222764	3.035 6714	9.999 9998	50	
	20	6.986 6048	211893	6.986 6050	211893	3.013 3950	9.999 9998	40	
	30	7.007 7941	202034	7.007 7943	202034	2.992 2057	9.999 9998	30	
	40	7.027 9975	193051	7.027 9977	193052	2.972 0023	9.999 9998	20	
	50	7.047 3026	184834	7.047 3029	184834	2.952 6971	9.999 9997	10	
4	0	7.065 7860	177288	7.065 7863	177288	2.934 2137	9.999 9997	0	56
	10	7.083 5148	170333	7.083 5151	170333	2.916 4849	9.999 9997	50	
	20	7.100 5481	163904	7.100 5484	163905	2.899 4516	9.999 9997	40	
	30	7.116 9385	157943	7.116 9389	157943	2.883 0611	9.999 9996	30	
	40	7.132 7328	152399	7.132 7332	152400	2.867 2668	9.999 9996	20	
	50	7.147 9727	147233	7.147 9732	147232	2.852 0268	9.999 9996	10	
5	0	7.162 6960	142404	7.162 6964	142405	2.837 3036	9.999 9995	0	55
	10	7.176 9364	137883	7.176 9369	137883	2.823 0631	9.999 9995	50	
	20	7.190 7247	133639	7.190 7252	133640	2.809 2748	9.999 9995	40	
	30	7.204 0886	129650	7.204 0892	129650	2.795 9108	9.999 9994	30	
	40	7.217 0536	125891	7.217 0542	125891	2.782 9458	9.999 9994	20	
	50	7.229 6427	122344	7.229 6433	122345	2.770 3567	9.999 9994	10	
6	0	7.241 8771	118993	7.241 8778	118993	2.758 1222	9.999 9993	0	54
	10	7.253 7764	115818	7.253 7771	115819	2.746 2229	9.999 9993	50	
	20	7.265 3582	112810	7.265 3590	112810	2.734 6410	9.999 9993	40	
	30	7.276 6392	109954	7.276 6400	109954	2.723 3600	9.999 9992	30	
	40	7.287 6346	107238	7.287 6354	107239	2.712 3646	9.999 9992	20	
	50	7.298 3584	104655	7.298 3593	104655	2.701 6407	9.999 9991	10	
7	0	7.308 8239	102191	7.308 8248	102192	2.691 1752	9.999 9991	0	53
	10	7.319 0430	99842	7.319 0440	99842	2.680 9560	9.999 9991	50	
	20	7.329 0272	97598	7.329 0282	97599	2.670 9718	9.999 9990	40	
	30	7.338 7870	95453	7.338 7881	95453	2.661 2119	9.999 9990	30	
	40	7.348 3323	93400	7.348 3334	93401	2.651 6666	9.999 9989	20	
	50	7.357 6723	91434	7.357 6735	91434	2.642 3265	9.999 9989	10	
8	0	7.366 8157	89548	7.366 8169	89549	2.633 1831	9.999 9988	0	52
	10	7.375 7705	87739	7.375 7718	87739	2.624 2282	9.999 9988	50	
	20	7.384 5444	86002	7.384 5457	86002	2.615 4543	9.999 9987	40	
	30	7.393 1446	84332	7.393 1459	84332	2.606 8541	9.999 9987	30	
	40	7.401 5778	82725	7.401 5791	82726	2.598 4209	9.999 9986	20	
	50	7.409 8503	81178	7.409 8517	81179	2.590 1483	9.999 9986	10	
9	0	7.417 9681	79689	7.417 9696	79690	2.582 0304	9.999 9985	0	51
	10	7.425 9370	78254	7.425 9386	78254	2.574 0614	9.999 9985	50	
	20	7.433 7624	76868	7.433 7640	76868	2.566 2360	9.999 9984	40	
	30	7.441 4492	75531	7.441 4508	75532	2.558 5492	9.999 9983	30	
	40	7.449 0023	74240	7.449 0040	74241	2.550 9960	9.999 9983	20	
	50	7.456 4263	72992	7.456 4281	72992	2.543 5719	9.999 9982	10	
10	0	7.463 7255		7.463 7273		2.536 2727	9.999 9982	0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	"	'

89°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	″	′
10	0	7.463 7255	71786	7.463 7273	71787	2.536 2727	9.999 9982	0	50
	10	7.470 9041	70618	7.470 9060	70619	2.529 0940	9.999 9981	50	
	20	7.477 9659	69488	7.477 9679	69489	2.522 0321	9.999 9980	40	
	30	7.484 9147	68394	7.484 9168	68394	2.515 0832	9.999 9980	30	
	40	7.491 7541	67334	7.491 7562	67335	2.508 2438	9.999 9979	20	
	50	7.498 4875	66306	7.498 4897	66306	2.501 5103	9.999 9978	10	
11	0	7.505 1181	65308	7.505 1203	65309	2.494 8797	9.999 9978	0	49
	10	7.511 6489	64341	7.511 6512	64342	2.488 3488	9.999 9977	50	
	20	7.518 0830	63401	7.518 0854	63402	2.481 9146	9.999 9976	40	
	30	7.524 4231	62490	7.524 4256	62490	2.475 5744	9.999 9976	30	
	40	7.530 6721	61603	7.530 6746	61603	2.469 3254	9.999 9975	20	
	50	7.536 8324	60741	7.536 8349	60742	2.463 1651	9.999 9974	10	
12	0	7.542 9065	59903	7.542 9091	59904	2.457 0909	9.999 9974	0	48
	10	7.548 8968	59089	7.548 8995	59089	2.451 1005	9.999 9973	50	
	20	7.554 8057	58295	7.554 8084	58296	2.445 1916	9.999 9972	40	
	30	7.560 6352	57523	7.560 6380	57524	2.439 3620	9.999 9971	30	
	40	7.566 3875	56771	7.566 3904	56772	2.433 6096	9.999 9971	20	
	50	7.572 0646	56038	7.572 0676	56039	2.427 9324	9.999 9970	10	
13	0	7.577 6684	55325	7.577 6715	55326	2.422 3285	9.999 9969	0	47
	10	7.583 2009	54629	7.583 2041	54629	2.416 7959	9.999 9968	50	
	20	7.588 6638	53950	7.588 6670	53951	2.411 3330	9.999 9967	40	
	30	7.594 0588	53288	7.594 0621	53289	2.405 9379	9.999 9967	30	
	40	7.599 3876	52642	7.599 3910	52643	2.400 6090	9.999 9966	20	
	50	7.604 6518	52012	7.604 6553	52013	2.395 3447	9.999 9965	10	
14	0	7.609 8530	51396	7.609 8566	51397	2.390 1434	9.999 9964	0	46
	10	7.614 9926	50795	7.614 9963	50795	2.385 0037	9.999 9963	50	
	20	7.620 0721	50207	7.620 0758	50209	2.379 9242	9.999 9962	40	
	30	7.625 0928	49634	7.625 0967	49635	2.374 9033	9.999 9961	30	
	40	7.630 0562	49073	7.630 0602	49074	2.369 9398	9.999 9960	20	
	50	7.634 9635	48525	7.634 9676	48525	2.365 0324	9.999 9960	10	
15	0	7.639 8160	47989	7.639 8201	47990	2.360 1799	9.999 9959	0	45
	10	7.644 6149	47464	7.644 6191	47465	2.355 3809	9.999 9958	50	
	20	7.649 3613	46950	7.649 3656	46952	2.350 6344	9.999 9957	40	
	30	7.654 0563	46449	7.654 0608	46449	2.345 9392	9.999 9956	30	
	40	7.658 7012	45957	7.658 7057	45958	2.341 2943	9.999 9955	20	
	50	7.663 2969	45476	7.663 3015	45477	2.336 6985	9.999 9954	10	
16	0	7.667 8445	45005	7.667 8492	45006	2.332 1508	9.999 9953	0	44
	10	7.672 3450	44543	7.672 3498	44544	2.327 6502	9.999 9952	50	
	20	7.676 7993	44091	7.676 8042	44092	2.323 1958	9.999 9951	40	
	30	7.681 2084	43648	7.681 2134	43649	2.318 7866	9.999 9950	30	
	40	7.685 5732	43213	7.685 5783	43214	2.314 4217	9.999 9949	20	
	50	7.689 8945	42788	7.689 8997	42789	2.310 1003	9.999 9948	10	
17	0	7.694 1733	42370	7.694 1786	42371	2.305 8214	9.999 9947	0	43
	10	7.698 4103	41961	7.698 4157	41962	2.301 5843	9.999 9946	50	
	20	7.702 6064	41559	7.702 6119	41560	2.297 3881	9.999 9945	40	
	30	7.706 7623	41165	7.706 7679	41167	2.293 2321	9.999 9944	30	
	40	7.710 8788	40779	7.710 8846	40779	2.289 1154	9.999 9943	20	
	50	7.714 9567	40399	7.714 9625	40401	2.285 0375	9.999 9942	10	
18	0	7.718 9966	40027	7.719 0026	40028	2.280 9974	9.999 9940	0	42
	10	7.722 9993	39662	7.723 0054	39663	2.276 9946	9.999 9939	50	
	20	7.726 9655	39302	7.726 9717	39303	2.273 0283	9.999 9938	40	
	30	7.730 8957	38951	7.730 9020	38952	2.269 0980	9.999 9937	30	
	40	7.734 7908	38603	7.734 7972	38605	2.265 2028	9.999 9936	20	
	50	7.738 6511	38264	7.738 6577	38264	2.261 3423	9.999 9935	10	
19	0	7.742 4775	37930	7.742 4841	37931	2.257 5159	9.999 9934	0	41
	10	7.746 2705	37601	7.746 2772	37602	2.253 7228	9.999 9933	50	
	20	7.750 0306	37278	7.750 0374	37280	2.249 9626	9.999 9931	40	
	30	7.753 7584	36961	7.753 7654	36962	2.246 2346	9.999 9930	30	
	40	7.757 4545	36649	7.757 4616	36650	2.242 5384	9.999 9929	20	
	50	7.761 1194	36343	7.761 1266	36344	2.238 8734	9.999 9928	10	
20	0	7.764 7537		7.764 7610		2.235 2390	9.999 9927	0	40
′	″	Cos	d.	Cotg	d.	Tang	Sin	″	′

89°

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′	″	Sin	d.	Tang	d. c.	Cotg	Cos	″	′
20	0	7.764 7537	36040	7.764 7610	36042	2.235 2390	9.999 9927	0	40
	10	7.768 3577	35745	7.768 3652	35746	2.231 6348	9.999 9925	50	
	20	7.771 9322	35452	7.771 9398	35453	2.228 0602	9.999 9924	40	
	30	7.775 4774	35165	7.775 4851	35167	2.224 5149	9.999 9923	30	
	40	7.778 9939	34883	7.779 0018	34884	2.220 9982	9.999 9922	20	
	50	7.782 4822	34605	7.782 4902	34606	2.217 5098	9.999 9920	10	
21	0	7.785 9427	34331	7.785 9508	34333	2.214 0492	9.999 9919	0	39
	10	7.789 3758	34062	7.789 3841	34063	2.210 6159	9.999 9918	50	
	20	7.792 7820	33797	7.792 7904	33798	2.207 2096	9.999 9916	40	
	30	7.796 1617	33536	7.796 1702	33538	2.203 8298	9.999 9915	30	
	40	7.799 5153	33279	7.799 5240	33280	2.200 4760	9.999 9914	20	
	50	7.802 8432	33026	7.802 8520	33027	2.197 1480	9.999 9912	10	
22	0	7.806 1458	32777	7.806 1547	32778	2.193 8453	9.999 9911	0	38
	10	7.809 4235	32531	7.809 4325	32533	2.190 5675	9.999 9910	50	
	20	7.812 6766	32289	7.812 6858	32290	2.187 3142	9.999 9908	40	
	30	7.815 9055	32051	7.815 9148	32053	2.184 0852	9.999 9907	30	
	40	7.819 1106	31816	7.819 1201	31817	2.180 8799	9.999 9906	20	
	50	7.822 2922	31585	7.822 3018	31586	2.177 6982	9.999 9904	10	
23	0	7.825 4507	31357	7.825 4604	31358	2.174 5396	9.999 9903	0	37
	10	7.828 5864	31132	7.828 5962	31134	2.171 4038	9.999 9901	50	
	20	7.831 6996	30910	7.831 7096	30911	2.168 2904	9.999 9900	40	
	30	7.834 7906	30692	7.834 8007	30694	2.165 1993	9.999 9899	30	
	40	7.837 8598	30476	7.837 8701	30478	2.162 1299	9.999 9897	20	
	50	7.840 9074	30264	7.840 9179	30265	2.159 0821	9.999 9896	10	
24	0	7.843 9338	30055	7.843 9444	30056	2.156 0556	9.999 9894	0	36
	10	7.846 9393	29848	7.846 9500	29850	2.153 0500	9.999 9893	50	
	20	7.849 9241	29644	7.849 9350	29646	2.150 0650	9.999 9891	40	
	30	7.852 8885	29444	7.852 8996	29444	2.147 1004	9.999 9890	30	
	40	7.855 8329	29245	7.855 8440	29247	2.144 1560	9.999 9888	20	
	50	7.858 7574	29049	7.858 7687	29051	2.141 2313	9.999 9887	10	
25	0	7.861 6623	28856	7.861 6738	28858	2.138 3262	9.999 9885	0	35
	10	7.864 5479	28666	7.864 5596	28667	2.135 4404	9.999 9884	50	
	20	7.867 4145	28478	7.867 4263	28480	2.132 5737	9.999 9882	40	
	30	7.870 2623	28293	7.870 2743	28294	2.129 7257	9.999 9881	30	
	40	7.873 0916	28109	7.873 1037	28110	2.126 8963	9.999 9879	20	
	50	7.875 9025	27928	7.875 9147	27930	2.124 0853	9.999 9877	10	
26	0	7.878 6953	27750	7.878 7077	27752	2.121 2923	9.999 9876	0	34
	10	7.881 4703	27574	7.881 4829	27575	2.118 5171	9.999 9874	50	
	20	7.884 2277	27400	7.884 2404	27402	2.115 7596	9.999 9873	40	
	30	7.886 9677	27228	7.886 9806	27230	2.113 0194	9.999 9871	30	
	40	7.889 6905	27058	7.889 7036	27060	2.110 2964	9.999 9869	20	
	50	7.892 3963	26891	7.892 4096	26892	2.107 5904	9.999 9868	10	
27	0	7.895 0854	26726	7.895 0988	26727	2.104 9012	9.999 9866	0	33
	10	7.897 7580	26561	7.897 7715	26564	2.102 2285	9.999 9864	50	
	20	7.900 4141	26401	7.900 4279	26402	2.099 5721	9.999 9863	40	
	30	7.903 0542	26241	7.903 0681	26242	2.096 9319	9.999 9861	30	
	40	7.905 6783	26083	7.905 6923	26085	2.094 3077	9.999 9859	20	
	50	7.908 2866	25927	7.908 3008	25930	2.091 6992	9.999 9858	10	
28	0	7.910 8793	25774	7.910 8938	25775	2.089 1062	9.999 9856	0	32
	10	7.913 4567	25622	7.913 4713	25623	2.086 5287	9.999 9854	50	
	20	7 916 0189	25471	7.916 0336	25473	2.083 9664	9.999 9852	40	
	30	7.918 5660	25323	7.918 5809	25325	2.081 4191	9.999 9851	30	
	40	7.921 0983	25176	7.921 1134	25178	2.078 8866	9.999 9849	20	
	50	7.923 6159	25031	7.923 6312	25032	2.076 3688	9.999 9847	10	
29	0	7.926 1190	24887	7.926 1344	24889	2.073 8656	9.999 9845	0	31
	10	7.928 6077	24746	7.928 6233	24748	2.071 3767	9.999 9844	50	
	20	7.931 0823	24605	7.931 0981	24607	2.068 9019	9.999 9842	40	
	30	7.933 5428	24467	7.933 5588	24469	2.066 4412	9.999 9840	30	
	40	7.935 9895	24329	7.936 0057	24331	2.063 9943	9.999 9838	20	
	50	7.938 4224	24195	7.938 4388	24196	2.061 5612	9.999 9836	10	
30	0	7.940 8419		7.940 8584		2.059 1416	9.999 9835	0	30
′	″	Cos	d.	Cotg	d.	Tang	Sin	″	′

89°

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′	″	Sin	d.	Tang	d. c.	Cotg	Cos	″	′
30	0	7.940 8419	24060	7.940 8584	24062	2.059 1416	9.999 9835	0	30
	10	7.943 2479	23927	7.943 2646	23929	2.056 7354	9.999 9833	50	
	20	7.945 6406	23797	7.945 6575	23799	2.054 3425	9.999 9831	40	
	30	7.948 0203	23666	7.948 0374	23668	2.051 9626	9.999 9829	30	
	40	7.950 3869	23539	7.950 4042	23540	2.049 5958	9.999 9827	20	
	50	7.952 7408	23411	7.952 7582	23414	2.047 2418	9.999 9825	10	
31	0	7.955 0819	23286	7.955 0996	23288	2.044 9004	9.999 9823	0	29
	10	7.957 4105	23162	7.957 4284	23163	2.042 5716	9.999 9822	50	
	20	7.959 7267	23039	7.959 7447	23041	2.040 2553	9.999 9820	40	
	30	7.962 0306	22917	7.962 0488	22920	2.037 9512	9.999 9818	30	
	40	7.964 3223	22797	7.964 3408	22798	2.035 6592	9.999 9816	20	
	50	7.966 6020	22678	7.966 6206	22680	2.033 3794	9.999 9814	10	
32	0	7.968 8698	22560	7.968 8886	22563	2.031 1114	9.999 9812	0	28
	10	7.971 1258	22444	7.971 1449	22445	2.028 8551	9.999 9810	50	
	20	7.973 3702	22328	7.973 3894	22330	2.026 6106	9.999 9808	40	
	30	7.975 6030	22214	7.975 6224	22216	2.024 3776	9.999 9806	30	
	40	7.977 8244	22101	7.977 8440	22103	2.022 1560	9.999 9804	20	
	50	7.980 0345	21989	7.980 0543	21991	2.019 9457	9.999 9802	10	
33	0	7.982 2334	21878	7.982 2534	21880	2.017 7466	9.999 9800	0	27
	10	7.984 4212	21769	7.984 4414	21771	2.015 5586	9.999 9798	50	
	20	7.986 5981	21660	7.986 6185	21662	2.013 3815	9.999 9796	40	
	30	7.988 7641	21552	7.988 7847	21554	2.011 2153	9.999 9794	30	
	40	7.990 9193	21446	7.990 9401	21448	2.009 0599	9.999 9792	20	
	50	7.993 0639	21341	7.993 0849	21343	2.006 9151	9.999 9790	10	
34	0	7.995 1980	21236	7.995 2192	21238	2.004 7808	9.999 9788	0	26
	10	7.997 3216	21133	7.997 3430	21135	2.002 6570	9.999 9786	50	
	20	7.999 4349	21030	7.999 4565	21033	2.000 5435	9.999 9783	40	
	30	8.001 5379	20929	8.001 5598	20931	1.998 4402	9.999 9781	30	
	40	8.003 6308	20829	8.003 6529	20831	1.996 3471	9.999 9779	20	
	50	8.005 7137	20730	8.005 7360	20732	1.994 2640	9.999 9777	10	
35	0	8.007 7867	20630	8.007 8092	20633	1.992 1908	9.999 9775	0	25
	10	8.009 8497	20534	8.009 8725	20535	1.990 1275	9.999 9773	50	
	20	8.011 9031	20437	8.011 9260	20439	1.988 0740	9.999 9771	40	
	30	8.013 9468	20340	8.013 9699	20343	1.986 0301	9.999 9768	30	
	40	8.015 9808	20247	8.016 0042	20249	1.983 9958	9.999 9766	20	
	50	8.018 0055	20152	8.018 0291	20154	1.981 9709	9.999 9764	10	
36	0	8.020 0207	20059	8.020 0445	20061	1.979 9555	9.999 9762	0	24
	10	8.022 0266	19967	8.022 0506	19969	1.977 9494	9.999 9760	50	
	20	8.024 0233	19875	8.024 0475	19878	1.975 9525	9.999 9757	40	
	30	8.026 0108	19785	8.026 0353	19787	1.973 9647	9.999 9755	30	
	40	8.027 9893	19695	8.028 0140	19698	1.971 9860	9.999 9753	20	
	50	8.029 9588	19607	8.029 9838	19608	1.970 0162	9.999 9751	10	
37	0	8.031 9195	19518	8.031 9446	19521	1.968 0554	9.999 9748	0	23
	10	8.033 8713	19430	8.033 8967	19433	1.966 1033	9.999 9746	50	
	20	8.035 8143	19345	8.035 8400	19346	1.964 1600	9.999 9744	40	
	30	8.037 7488	19258	8.037 7746	19261	1.962 2254	9.999 9742	30	
	40	8.039 6746	19174	8.039 7007	19176	1.960 2993	9.999 9739	20	
	50	8.041 5920	19089	8.041 6183	19091	1.958 3817	9.999 9737	10	
38	0	8.043 5009	19005	8.043 5274	19008	1.956 4726	9.999 9735	0	22
	10	8.045 4014	18923	8.045 4282	18925	1.954 5718	9.999 9732	50	
	20	8.047 2937	18841	8.047 3207	18843	1.952 6793	9.999 9730	40	
	30	8.049 1778	18759	8.049 2050	18762	1.950 7950	9.999 9728	30	
	40	8.051 0537	18679	8.051 0812	18681	1.948 9188	9.999 9725	20	
	50	8.052 9216	18598	8.052 9493	18601	1.947 0507	9.999 9723	10	
39	0	8.054 7814	18519	8.054 8094	18521	1.945 1906	9.999 9721	0	21
	10	8.056 6333	18441	8.056 6615	18443	1.943 3385	9.999 9718	50	
	20	8.058 4774	18363	8.058 5058	18365	1.941 4942	9.999 9716	40	
	30	8.060 3137	18285	8.060 3423	18288	1.939 6577	9.999 9713	30	
	40	8.062 1422	18208	8.062 1711	18211	1.937 8289	9.999 9711	20	
	50	8.063 9630	18133	8.063 9922	18135	1.936 0078	9.999 9708	10	
40	0	8.065 7763		8.065 8057		1.934 1943	9.999 9706	0	20
′	″	Cos	d.	Cotg	d.	Tang	Sin	″	′

89°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	″	′
40	0	8.065 7763	18057	8.065 8057	18060	1.934 1943	9.999 9706	0	20
	10	8.067 5820	17983	8.067 6117	17985	1.932 3883	9.999 9704	50	
	20	8.069 3803	17908	8.069 4102	17910	1.930 5898	9.999 9701	40	
	30	8.071 1711	17835	8.071 2012	17838	1.928 7988	9.999 9699	30	
	40	8.072 9546	17761	8.072 9850	17764	1.927 0150	9.999 9696	20	
	50	8.074 7307	17690	8.074 7614	17692	1.925 2386	9.999 9694	10	
41	0	8.076 4997	17617	8.076 5306	17620	1.923 4694	9.999 9691	0	19
	10	8.078 2614	17547	8.078 2926	17549	1.921 7074	9.999 9689	50	
	20	8.080 0161	17476	8.080 0475	17478	1.919 9525	9.999 9686	40	
	30	8.081 7637	17405	8.081 7953	17408	1.918 2047	9.999 9684	30	
	40	8.083 5042	17337	8.083 5361	17339	1.916 4639	9.999 9681	20	
	50	8.085 2379	17267	8.085 2700	17270	1.914 7300	9.999 9678	10	
42	0	8.086 9646	17199	8.086 9970	17202	1.913 0030	9.999 9676	0	18
	10	8.088 6845	17131	8.088 7172	17133	1.911 2828	9.999 9673	50	
	20	8.090 3976	17064	8.090 4305	17067	1.909 5695	9.999 9671	40	
	30	8.092 1040	16997	8.092 1372	16999	1.907 8628	9.999 9668	30	
	40	8.093 8037	16931	8.093 8371	16934	1.906 1629	9.999 9666	20	
	50	8.095 4968	16864	8.095 5305	16867	1.904 4695	9.999 9663	10	
43	0	8.097 1832	16800	8.097 2172	16803	1.902 7828	9.999 9660	0	17
	10	8.098 8632	16735	8.098 8975	16737	1.901 1025	9.999 9658	50	
	20	8.100 5367	16671	8.100 5712	16674	1.899 4288	9.999 9655	40	
	30	8.102 2038	16607	8.102 2386	16609	1.897 7614	9.999 9652	30	
	40	8.103 8645	16543	8.103 8995	16547	1.896 1005	9.999 9650	20	
	50	8.105 5188	16481	8.105 5542	16483	1.894 4458	9.999 9647	10	
44	0	8.107 1669	16419	8.107 2025	16421	1.892 7975	9.999 9644	0	16
	10	8.108 8088	16357	8.108 8446	16360	1.891 1554	9.999 9642	50	
	20	8.110 4445	16295	8.110 4806	16298	1.889 5194	9.999 9639	40	
	30	8.112 0740	16234	8.112 1104	16237	1.887 8896	9.999 9636	30	
	40	8.113 6974	16174	8.113 7341	16177	1.886 2659	9.999 9633	20	
	50	8.115 3148	16114	8.115 3518	16116	1.884 6482	9.999 9631	10	
45	0	8.116 9262	16055	8.116 9634	16057	1.883 0366	9.999 9628	0	15
	10	8.118 5317	15995	8.118 5691	15998	1.881 4309	9.999 9625	50	
	20	8.120 1312	15936	8.120 1689	15940	1.879 8311	9.999 9622	40	
	30	8.121 7248	15879	8.121 7629	15881	1.878 2371	9.999 9620	30	
	40	8.123 3127	15820	8.123 3510	15823	1.876 6490	9.999 9617	20	
	50	8.124 8947	15763	8.124 9333	15766	1.875 0667	9.999 9614	10	
46	0	8.126 4710	15706	8.126 5099	15708	1.873 4901	9.999 9611	0	14
	10	8.128 0416	15649	8.128 0807	15653	1.871 9193	9.999 9608	50	
	20	8.129 6065	15593	8.129 6460	15596	1.870 3540	9.999 9606	40	
	30	8.131 1658	15538	8.131 2056	15540	1.868 7944	9.999 9603	30	
	40	8.132 7196	15482	8.132 7596	15485	1.867 2404	9.999 9600	20	
	50	8.134 2678	15426	8.134 3081	15429	1.865 6919	9.999 9597	10	
47	0	8.135 8104	15373	8.135 8510	15376	1.864 1490	9.999 9594	0	13
	10	8.137 3477	15318	8.137 3886	15321	1.862 6114	9.999 9591	50	
	20	8.138 8795	15264	8.138 9207	15267	1.861 0793	9.999 9588	40	
	30	8.140 4059	15211	8.140 4474	15213	1.859 5526	9.999 9585	30	
	40	8.141 9270	15157	8.141 9687	15161	1.858 0313	9.999 9583	20	
	50	8.143 4427	15105	8.143 4848	15108	1.856 5152	9.999 9580	10	
48	0	8.144 9532	15053	8.144 9956	15055	1.855 0044	9.999 9577	0	12
	10	8.146 4585	15001	8.146 5011	15004	1.853 4989	9.999 9574	50	
	20	8.147 9586	14948	8.148 0015	14952	1.851 9985	9.999 9571	40	
	30	8.149 4534	14898	8.149 4967	14900	1.850 5033	9.999 9568	30	
	40	8.150 9432	14847	8.150 9867	14850	1.849 0133	9.999 9565	20	
	50	8.152 4279	14796	8.152 4717	14799	1.847 5283	9.999 9562	10	
49	0	8.153 9075	14746	8.153 9516	14749	1.846 0484	9.999 9559	0	11
	10	8.155 3821	14696	8.155 4265	14699	1.844 5735	9.999 9556	50	
	20	8.156 8517	14646	8.156 8964	14649	1.843 1036	9.999 9553	40	
	30	8.158 3163	14597	8.158 3613	14600	1.841 6387	9.999 9550	30	
	40	8.159 7760	14548	8.159 8213	14552	1.840 1787	9.999 9547	20	
	50	8.161 2308	14500	8.161 2765	14502	1.838 7235	9.999 9544	10	
50	0	8.162 6808		8.162 7267		1.837 2733	9.999 9541	0	10
′	″	Cos	d.	Cotg	d.	Tang	Sin	″	′

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	″	′
50	0	8.162 6808	14451	8.162 7267	14455	1.837 2733	9.999 9541	0	10
	10	8.164 1259	14404	8.164 1722	14406	1.835 8278	9.999 9538	50	
	20	8.165 5663	14356	8.165 6128	14359	1.834 3872	9.999 9534	40	
	30	8.167 0019	14308	8.167 0487	14312	1.832 9513	9.999 9531	30	
	40	8.168 4327	14262	8.168 4799	14265	1.831 5201	9.999 9528	20	
	50	8.169 8589	14215	8.169 9064	14218	1.830 0936	9.999 9525	10	
51	0	8.171 2804	14168	8.171 3282	14171	1.828 6718	9.999 9522	0	9
	10	8.172 6972	14122	8.172 7453	14126	1.827 2547	9.999 9519	50	
	20	8.174 1094	14077	8.174 1579	14079	1.825 8421	9.999 9516	40	
	30	8.175 5171	14031	8.175 5658	14035	1.824 4342	9.999 9513	30	
	40	8.176 9202	13986	8.176 9693	13989	1.823 0307	9.999 9509	20	
	50	8.178 3188	13941	8.178 3682	13944	1.821 6318	9.999 9506	10	
52	0	8.179 7129	13896	8.179 7626	13899	1.820 2374	9.999 9503	0	8
	10	8.181 1025	13852	8.181 1525	13856	1.818 8475	9.999 9500	50	
	20	8.182 4877	13808	8.182 5381	13811	1.817 4619	9.999 9497	40	
	30	8.183 8685	13765	8.183 9192	13767	1.816 0808	9.999 9494	30	
	40	8.185 2450	13720	8.185 2959	13724	1.814 7041	9.999 9490	20	
	50	8.186 6170	13678	8.186 6683	13681	1.813 3317	9.999 9487	10	
53	0	8.187 9848	13634	8.188 0364	13638	1.811 9636	9.999 9484	0	7
	10	8.189 3482	13592	8.189 4002	13595	1.810 5998	9.999 9481	50	
	20	8.190 7074	13550	8.190 7597	13553	1.809 2403	9.999 9477	40	
	30	8.192 0624	13507	8.192 1150	13510	1.807 8850	9.999 9474	30	
	40	8.193 4131	13465	8.193 4660	13469	1.806 5340	9.999 9471	20	
	50	8.194 7596	13424	8.194 8129	13427	1.805 1871	9.999 9467	10	
54	0	8.196 1020	13383	8.196 1556	13386	1.803 8444	9.999 9464	0	6
	10	8.197 4403	13341	8.197 4942	13344	1.802 5058	9.999 9461	50	
	20	8.198 7744	13300	8.198 8286	13304	1.801 1714	9.999 9458	40	
	30	8.200 1044	13260	8.200 1590	13263	1.799 8410	9.999 9454	30	
	40	8.201 4304	13219	8.201 4853	13223	1.798 5147	9.999 9451	20	
	50	8.202 7523	13180	8.202 8076	13183	1.797 1924	9.999 9448	10	
55	0	8.204 0703	13139	8.204 1259	13142	1.795 8741	9.999 9444	0	5
	10	8.205 3842	13100	8.205 4401	13104	1.794 5599	9.999 9441	50	
	20	8.206 6942	13060	8.206 7505	13063	1.793 2495	9.999 9437	40	
	30	8.208 0002	13022	8.208 0568	13025	1.791 9432	9.999 9434	30	
	40	8.209 3024	12982	8.209 3593	12986	1.790 6407	9.999 9431	20	
	50	8.210 6006	12943	8.210 6579	12947	1.789 3421	9.999 9427	10	
56	0	8.211 8949	12905	8.211 9526	12908	1.788 0474	9.999 9424	0	4
	10	8.213 1854	12867	8.213 2434	12870	1.786 7566	9.999 9420	50	
	20	8.214 4721	12829	8.214 5304	12833	1.785 4696	9.999 9417	40	
	30	8.215 7550	12791	8.215 8137	12794	1.784 1863	9.999 9413	30	
	40	8.217 0341	12754	8.217 0931	12757	1.782 9069	9.999 9410	20	
	50	8.218 3095	12716	8.218 3688	12720	1.781 6312	9.999 9406	10	
57	0	8.219 5811	12679	8.219 6408	12682	1.780 3592	9.999 9403	0	3
	10	8.220 8490	12642	8.220 9090	12646	1.779 0910	9.999 9400	50	
	20	8.222 1132	12605	8.222 1736	12609	1.777 8264	9.999 9396	40	
	30	8.223 3737	12569	8.223 4345	12572	1.776 5655	9.999 9392	30	
	40	8.224 6306	12533	8.224 6917	12536	1.775 3083	9.999 9389	20	
	50	8.225 8839	12496	8.225 9453	12500	1.774 0547	9.999 9385	10	
58	0	8.227 1335	12461	8.227 1953	12464	1.772 8047	9.999 9382	0	2
	10	8.228 3796	12425	8.228 4417	12429	1.771 5583	9.999 9378	50	
	20	8.229 6221	12389	8.229 6846	12393	1.770 3154	9.999 9375	40	
	30	8.230 8610	12355	8.230 9239	12358	1.769 0761	9.999 9371	30	
	40	8.232 0965	12319	8.232 1597	12323	1.767 8403	9.999 9368	20	
	50	8.233 3284	12284	8.233 3920	12288	1.766 6080	9.999 9364	10	
59	0	8.234 5568	12250	8.234 6208	12253	1.765 3792	9.999 9360	0	1
	10	8.235 7818	12215	8.235 8461	12219	1.764 1539	9.999 9357	50	
	20	8.237 0033	12181	8.237 0680	12185	1.762 9320	9.999 9353	40	
	30	8.238 2214	12147	8.238 2865	12150	1.761 7135	9.999 9349	30	
	40	8.239 4361	12113	8.239 5015	12117	1.760 4985	9.999 9346	20	
	50	8.240 6474	12079	8.240 7132	12083	1.759 2868	9.999 9342	10	
60	0	8.241 8553		8.241 9215		1.758 0785	9.999 9338	0	0
′	″	Cos	d.	Cotg	d.	Tang	Sin	″	′

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	"	'
0	0	8.241 8553	12046	8.241 9215	12049	1.758 0785	9.999 9338	0	60
	10	8.243 0599	12012	8.243 1264	12016	1.756 8736	9.999 9335	50	
	20	8.244 2611	11980	8.244 3280	11983	1.755 6720	9.999 9331	40	
	30	8.245 4591	11946	8.245 5263	11950	1.754 4737	9.999 9327	30	
	40	8.246 6537	11914	8.246 7213	11918	1.753 2787	9.999 9324	20	
	50	8.247 8451	11881	8.247 9131	11884	1.752 0869	9.999 9320	10	
1	0	8.249 0332	11848	8.249 1015	11853	1.750 8985	9.999 9316	0	59
	10	8.250 2180	11816	8.250 2868	11820	1.749 7132	9.999 9313	50	
	20	8.251 3996	11785	8.251 4688	11788	1.748 5312	9.999 9309	40	
	30	8.252 5781	11752	8.252 6476	11756	1.747 3524	9.999 9305	30	
	40	8.253 7533	11721	8.253 8232	11724	1.746 1768	9.999 9301	20	
	50	8.254 9254	11689	8.254 9956	11693	1.745 0044	9.999 9297	10	
2	0	8.256 0943	11657	8.256 1649	11661	1.743 8351	9.999 9294	0	58
	10	8.257 2600	11627	8.257 3310	11631	1.742 6690	9.999 9290	50	
	20	8.258 4227	11595	8.258 4941	11599	1.741 5059	9.999 9286	40	
	30	8.259 5822	11565	8.259 6540	11568	1.740 3460	9.999 9282	30	
	40	8.260 7387	11533	8.260 8108	11538	1.739 1892	9.999 9278	20	
	50	8.261 8920	11504	8.261 9646	11507	1.738 0354	9.999 9275	10	
3	0	8.263 0424	11472	8.263 1153	11477	1.736 8847	9.999 9271	0	57
	10	8.264 1896	11443	8.264 2630	11446	1.735 7370	9.999 9267	50	
	20	8.265 3339	11412	8.265 4076	11416	1.734 5924	9.999 9263	40	
	30	8.266 4751	11383	8.266 5492	11387	1.733 4508	9.999 9259	30	
	40	8.267 6134	11353	8.267 6879	11357	1.732 3121	9.999 9255	20	
	50	8.268 7487	11323	8.268 8236	11327	1.731 1764	9.999 9251	10	
4	0	8.269 8810	11294	8.269 9563	11297	1.730 0437	9.999 9247	0	56
	10	8.271 0104	11264	8.271 0860	11269	1.728 9140	9.999 9243	50	
	20	8.272 1368	11236	8.272 2129	11239	1.727 7871	9.999 9239	40	
	30	8.273 2604	11206	8.273 3368	11210	1.726 6632	9.999 9236	30	
	40	8.274 3810	11177	8.274 4578	11182	1.725 5422	9.999 9232	20	
	50	8.275 4987	11149	8.275 5760	11152	1.724 4240	9.999 9228	10	
5	0	8.276 6136	11120	8.276 6912	11124	1.723 3088	9.999 9224	0	55
	10	8.277 7256	11092	8.277 8036	11096	1.722 1964	9.999 9220	50	
	20	8.278 8348	11063	8.278 9132	11068	1.721 0868	9.999 9216	40	
	30	8.279 9411	11036	8.280 0200	11039	1.719 9800	9.999 9212	30	
	40	8.281 0447	11007	8.281 1239	11012	1.718 8761	9.999 9208	20	
	50	8.282 1454	10980	8.282 2251	10983	1.717 7749	9.999 9204	10	
6	0	8.283 2434	10952	8.283 3234	10956	1.716 6766	9.999 9200	0	54
	10	8.284 3386	10924	8.284 4190	10928	1.715 5810	9.999 9196	50	
	20	8.285 4310	10897	8.285 5118	10901	1.714 4882	9.999 9191	40	
	30	8.286 5207	10869	8.286 6019	10874	1.713 3981	9.999 9187	30	
	40	8.287 6076	10843	8.287 6893	10847	1.712 3107	9.999 9183	20	
	50	8.288 6919	10815	8.288 7740	10819	1.711 2260	9.999 9179	10	
7	0	8.289 7734	10789	8.289 8559	10793	1.710 1441	9.999 9175	0	53
	10	8.290 8523	10762	8.290 9352	10766	1.709 0648	9.999 9171	50	
	20	8.291 9285	10735	8.292 0118	10739	1.707 9882	9.999 9167	40	
	30	8.293 0020	10709	8.293 0857	10713	1.706 9143	9.999 9163	30	
	40	8.294 0729	10682	8.294 1570	10686	1.705 8430	9.999 9159	20	
	50	8.295 1411	10656	8.295 2256	10661	1.704 7744	9.999 9154	10	
8	0	8.296 2067	10630	8.296 2917	10634	1.703 7083	9.999 9150	0	52
	10	8.297 2697	10604	8.297 3551	10608	1.702 6449	9.999 9146	50	
	20	8.298 3301	10578	8.298 4159	10583	1.701 5841	9.999 9142	40	
	30	8.299 3879	10553	8.299 4742	10556	1.700 5258	9.999 9138	30	
	40	8.300 4432	10527	8.300 5298	10532	1.699 4702	9.999 9134	20	
	50	8.301 4959	10501	8.301 5830	10505	1.698 4170	9.999 9129	10	
9	0	8.302 5460	10477	8.302 6335	10481	1.697 3665	9.999 9125	0	51
	10	8.303 5937	10451	8.303 6816	10455	1.696 3184	9.999 9121	50	
	20	8.304 6388	10425	8.304 7271	10430	1.695 2729	9.999 9117	40	
	30	8.305 6813	10401	8.305 7701	10405	1.694 2299	9.999 9112	30	
	40	8.306 7214	10376	8.306 8106	10380	1.693 1894	9.999 9108	20	
	50	8.307 7590	10351	8.307 8486	10356	1.692 1514	9.999 9104	10	
10	0	8.308 7941		8.308 8842		1.691 1158	9.999 9100	0	50
'	"	Cos	d.	Cotg	d.	Tang	Sin	"	'

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	″	′
10	0	8.308 7941	10327	8.308 8842	10331	1.691 1158	9.999 9100	0	50
	10	8.309 8268	10302	8.309 9173	10306	1.690 0827	9.999 9095	50	
	20	8.310 8570	10278	8.310 9479	10282	1.689 0521	9.999 9091	40	
	30	8.311 8848	10253	8.311 9761	10258	1.688 0239	9.999 9087	30	
	40	8.312 9101	10230	8.313 0019	10234	1.686 9981	9.999 9082	20	
	50	8.313 9331	10205	8.314 0253	10209	1.685 9747	9.999 9078	10	
11	0	8.314 9536	10181	8.315 0462	10186	1.684 9538	9.999 9074	0	49
	10	8.315 9717	10158	8.316 0648	10162	1.683 9352	9.999 9069	50	
	20	8.316 9875	10133	8.317 0810	10138	1.682 9190	9.999 9065	40	
	30	8.318 0008	10111	8.318 0948	10114	1.681 9052	9.999 9061	30	
	40	8.319 0119	10086	8.319 1062	10092	1.680 8938	9.999 9056	20	
	50	8.320 0205	10064	8.320 1154	10067	1.679 8846	9.999 9052	10	
12	0	8.321 0269	10040	8.321 1221	10045	1.678 8779	9.999 9047	0	48
	10	8.322 0309	10017	8.322 1266	10021	1.677 8734	9.999 9043	50	
	20	8.323 0326	9993	8.323 1287	9998	1.676 8713	9.999 9039	40	
	30	8.324 0319	9971	8.324 1285	9975	1.675 8715	9.999 9034	30	
	40	8.325 0290	9948	8.325 1260	9953	1.674 8740	9.999 9030	20	
	50	8.326 0238	9925	8.326 1213	9930	1.673 8787	9.999 9025	10	
13	0	8.327 0163	9903	8.327 1143	9907	1.672 8857	9.999 9021	0	47
	10	8.328 0066	9880	8.328 1050	9884	1.671 8950	9.999 9016	50	
	20	8.328 9946	9858	8.329 0934	9862	1.670 9066	9.999 9012	40	
	30	8.329 9804	9835	8.330 0796	9840	1.669 9204	9.999 9007	30	
	40	8.330 9639	9813	8.331 0636	9818	1.668 9364	9.999 9003	20	
	50	8.331 9452	9791	8.332 0454	9795	1.667 9546	9.999 8998	10	
14	0	8.332 9243	9769	8.333 0249	9774	1.666 9751	9.999 8994	0	46
	10	8.333 9012	9747	8.334 0023	9751	1.665 9977	9.999 8989	50	
	20	8.334 8759	9725	8.334 9774	9730	1.665 0226	9.999 8985	40	
	30	8.335 8484	9703	8.335 9504	9708	1.664 0496	9.999 8980	30	
	40	8.336 8187	9682	8.336 9212	9686	1.663 0788	9.999 8976	20	
	50	8.337 7869	9660	8.337 8898	9665	1.662 1102	9.999 8971	10	
15	0	8.338 7529	9639	8.338 8563	9643	1.661 1437	9.999 8966	0	45
	10	8.339 7168	9617	8.339 8206	9622	1.660 1794	9.999 8962	50	
	20	8.340 6785	9597	8.340 7828	9601	1.659 2172	9.999 8957	40	
	30	8.341 6382	9575	8.341 7429	9580	1.658 2571	9.999 8953	30	
	40	8.342 5957	9553	8.342 7009	9558	1.657 2991	9.999 8948	20	
	50	8.343 5510	9533	8.343 6567	9538	1.656 3433	9.999 8943	10	
16	0	8.344 5043	9512	8.344 6105	9516	1.655 3895	9.999 8939	0	44
	10	8.345 4555	9492	8.345 5621	9496	1.654 4379	9.999 8934	50	
	20	8.346 4047	9470	8.346 5117	9475	1.653 4883	9.999 8929	40	
	30	8.347 3517	9450	8.347 4592	9455	1.652 5408	9.999 8925	30	
	40	8.348 2967	9429	8.348 4047	9434	1.651 5953	9.999 8920	20	
	50	8.349 2396	9409	8.349 3481	9414	1.650 6519	9.999 8915	10	
17	0	8.350 1805	9389	8.350 2895	9393	1.649 7105	9.999 8911	0	43
	10	8.351 1194	9368	8.351 2288	9373	1.648 7712	9.999 8906	50	
	20	8.352 0562	9348	8.352 1661	9353	1.647 8339	9.999 8901	40	
	30	8.352 9910	9328	8.353 1014	9333	1.646 8986	9.999 8896	30	
	40	8.353 9238	9308	8.354 0347	9313	1.645 9653	9.999 8892	20	
	50	8.354 8546	9289	8.354 9660	9293	1.645 0340	9.999 8887	10	
18	0	8.355 7835	9268	8.355 8953	9273	1.644 1047	9.999 8882	0	42
	10	8.356 7103	9248	8.356 8226	9253	1.643 1774	9.999 8877	50	
	20	8.357 6351	9229	8.357 7479	9234	1.642 2521	9.999 8872	40	
	30	8.358 5580	9210	8.358 6713	9214	1.641 3287	9.999 8868	30	
	40	8.359 4790	9189	8.359 5927	9194	1.640 4073	9.999 8863	20	
	50	8.360 3979	9171	8.360 5121	9176	1.639 4879	9.999 8858	10	
19	0	8.361 3150	9151	8.361 4297	9156	1.638 5703	9.999 8853	0	41
	10	8.362 2301	9132	8.362 3453	9136	1.637 6547	9.999 8848	50	
	20	8.363 1433	9112	8.363 2589	9118	1.636 7411	9.999 8843	40	
	30	8.364 0545	9094	8.364 1707	9098	1.635 8293	9.999 8839	30	
	40	8.364 9639	9074	8.365 0805	9080	1.634 9195	9.999 8834	20	
	50	8.365 8713	9056	8.365 9885	9060	1.634 0115	9.999 8829	10	
20	0	8.366 7769		8.366 8945		1.633 1055	9.999 8824	0	40
′	″	Cos	d.	Cotg	d.	Tang	Sin	″	′

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	8.366 7769	9037	8.366 8945	9042	1.633 1055	9.999 8824	5	0	40
	10	8.367 6806	9018	8.367 7987	9023	1.632 2013	9.999 8819	5	50	
	20	8.368 5824	8999	8.368 7010	9004	1.631 2990	9.999 8814	5	40	
	30	8.369 4823	8981	8.369 6014	8985	1.630 3986	9.999 8809	5	30	
	40	8.370 3804	8962	8.370 4999	8968	1.629 5001	9.999 8804	5	20	
	50	8.371 2766	8944	8.371 3967	8948	1.628 6033	9.999 8799	5	10	
21	0	8.372 1710	8925	8.372 2915	8930	1.627 7085	9.999 8794	5	0	39
	10	8.373 0635	8907	8.373 1845	8912	1.626 8155	9.999 8789	5	50	
	20	8.373 9542	8888	8.374 0757	8894	1.625 9243	9.999 8784	5	40	
	30	8.374 8430	8871	8.374 9651	8876	1.625 0349	9.999 8779	5	30	
	40	8.375 7301	8852	8.375 8527	8857	1.624 1473	9.999 8774	5	20	
	50	8.376 6153	8835	8.376 7384	8839	1.623 2616	9.999 8769	5	10	
22	0	8.377 4988	8816	8.377 6223	8822	1.622 3777	9.999 8764	5	0	38
	10	8.378 3804	8799	8.378 5045	8804	1.621 4955	9.999 8759	5	50	
	20	8.379 2603	8781	8.379 3849	8785	1.620 6151	9.999 8754	5	40	
	30	8.380 1384	8763	8.380 2634	8769	1.619 7366	9.999 8749	5	30	
	40	8.381 0147	8745	8.381 1403	8750	1.618 8597	9.999 8744	5	20	
	50	8.381 8892	8728	8.382 0153	8733	1.617 9847	9.999 8739	5	10	
23	0	8.382 7620	8710	8.382 8886	8715	1.617 1114	9.999 8734	5	0	37
	10	8.383 6330	8693	8.383 7601	8698	1.616 2399	9.999 8729	5	50	
	20	8.384 5023	8676	8.384 6299	8681	1.615 3701	9.999 8724	5	40	
	30	8.385 3699	8658	8.385 4980	8663	1.614 5020	9.999 8719	5	30	
	40	8.386 2357	8641	8.386 3643	8647	1.613 6357	9.999 8714	5	20	
	50	8.387 0998	8624	8.387 2290	8628	1.612 7710	9.999 8709	6	10	
24	0	8.387 9622	8607	8.388 0918	8612	1.611 9082	9.999 8703	5	0	36
	10	8.388 8229	8589	8.388 9530	8595	1.611 0470	9.999 8698	5	50	
	20	8.389 6818	8573	8.389 8125	8578	1.610 1875	9.999 8693	5	40	
	30	8.390 5391	8556	8.390 6703	8561	1.609 3297	9.999 8688	5	30	
	40	8.391 3947	8539	8.391 5264	8544	1.608 4736	9.999 8683	5	20	
	50	8.392 2486	8522	8.392 3808	8528	1.607 6192	9.999 8678	6	10	
25	0	8.393 1008	8505	8.393 2336	8510	1.606 7664	9.999 8672	5	0	35
	10	8.393 9513	8489	8.394 0846	8494	1.605 9154	9.999 8667	5	50	
	20	8.394 8002	8473	8.394 9340	8478	1.605 0660	9.999 8662	5	40	
	30	8.395 6475	8455	8.395 7818	8461	1.604 2182	9.999 8657	6	30	
	40	8.396 4930	8440	8.396 6279	8445	1.603 3721	9.999 8651	5	20	
	50	8.397 3370	8423	8.397 4724	8428	1.602 5276	9.999 8646	5	10	
26	0	8.398 1793	8406	8.398 3152	8412	1.601 6848	9.999 8641	5	0	34
	10	8.399 0199	8391	8.399 1564	8395	1.600 8436	9.999 8636	6	50	
	20	8.399 8590	8374	8.399 9959	8380	1.600 0041	9.999 8630	5	40	
	30	8.400 6964	8358	8.400 8339	8363	1.599 1661	9.999 8625	5	30	
	40	8.401 5322	8342	8.401 6702	8348	1.598 3298	9.999 8620	6	20	
	50	8.402 3664	8326	8.402 5050	8331	1.597 4950	9.999 8614	5	10	
27	0	8.403 1990	8310	8.403 3381	8315	1.596 6619	9.999 8609	5	0	33
	10	8.404 0300	8294	8.404 1696	8300	1.595 8304	9.999 8604	6	50	
	20	8.404 8594	8279	8.404 9996	8284	1.595 0004	9.999 8598	5	40	
	30	8.405 6873	8262	8.405 8280	8268	1.594 1720	9.999 8593	5	30	
	40	8.406 5135	8247	8.406 6548	8252	1.593 3452	9.999 8588	6	20	
	50	8.407 3382	8232	8.407 4800	8237	1.592 5200	9.999 8582	5	10	
28	0	8.408 1614	8215	8.408 3037	8221	1.591 6963	9.999 8577	5	0	32
	10	8.408 9829	8200	8.409 1258	8205	1.590 8742	9.999 8572	6	50	
	20	8.409 8029	8185	8.409 9463	8190	1.590 0537	9.999 8566	5	40	
	30	8.410 6214	8169	8.410 7653	8175	1.589 2347	9.999 8561	6	30	
	40	8.411 4383	8154	8.411 5828	8160	1.588 4172	9.999 8555	5	20	
	50	8.412 2537	8139	8.412 3988	8144	1.587 6012	9.999 8550	6	10	
29	0	8.413 0676	8124	8.413 2132	8129	1.586 7868	9.999 8544	5	0	31
	10	8.413 8800	8108	8.414 0261	8113	1.585 9739	9.999 8539	6	50	
	20	8.414 6908	8093	8.414 8374	8099	1.585 1626	9.999 8533	5	40	
	30	8.415 5001	8078	8.415 6473	8083	1.584 3527	9.999 8528	5	30	
	40	8.416 3079	8063	8.416 4556	8069	1.583 5444	9.999 8523	6	20	
	50	8.417 1142	8048	8.417 2625	8054	1.582 7375	9.999 8517	5	10	
30	0	8.417 9190		8.418 0679		1.581 9321	9.999 8512		0	30
'	"	Cos	d.	Cotg	d.	Tang	Sin	d.	"	'

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	8.417 9190	8033	8.418 0679	8038	1.581 9321	9.999 8512	6	0	30
	10	8.418 7223	8019	8.418 8717	8024	1.581 1283	9.999 8506	6	50	
	20	8.419 5242	8003	8.419 6741	8009	1.580 3259	9.999 8500	5	40	
	30	8.420 3245	7989	8.420 4750	7995	1.579 5250	9.999 8495	6	30	
	40	8.421 1234	7974	8.421 2745	7980	1.578 7255	9.999 8489	5	20	
	50	8.421 9208	7960	8.422 0725	7965	1.577 9275	9.999 8484	6	10	
31	0	8.422 7168	7945	8.422 8690	7950	1.577 1310	9.999 8478	5	0	29
	10	8.423 5113	7930	8.423 6640	7936	1.576 3360	9.999 8473	6	50	
	20	8.424 3043	7916	8.424 4576	7922	1.575 5424	9.999 8467	6	40	
	30	8.425 0959	7902	8.425 2498	7907	1.574 7502	9.999 8461	5	30	
	40	8.425 8861	7887	8.426 0405	7893	1.573 9595	9.999 8456	6	20	
	50	8.426 6748	7873	8.426 8298	7878	1.573 1702	9.999 8450	5	10	
32	0	8.427 4621	7859	8.427 6176	7865	1.572 3824	9.999 8445	6	0	28
	10	8.428 2480	7844	8.428 4041	7850	1.571 5959	9.999 8439	6	50	
	20	8.429 0324	7830	8.429 1891	7836	1.570 8109	9.999 8433	5	40	
	30	8.429 8154	7817	8.429 9727	7822	1.570 0273	9.999 8428	6	30	
	40	8.430 5971	7802	8.430 7549	7807	1.569 2451	9.999 8422	6	20	
	50	8.431 3773	7788	8.431 5356	7794	1.568 4644	9.999 8416	5	10	
33	0	8.432 1561	7774	8.432 3150	7780	1.567 6850	9.999 8411	6	0	27
	10	8.432 9335	7760	8.433 0930	7766	1.566 9070	9.999 8405	6	50	
	20	8.433 7095	7747	8.433 8696	7752	1.566 1304	9.999 8399	6	40	
	30	8.434 4842	7732	8.434 6448	7739	1.565 3552	9.999 8393	5	30	
	40	8.435 2574	7719	8.435 4187	7724	1.564 5813	9.999 8388	6	20	
	50	8.436 0293	7706	8.436 1911	7711	1.563 8089	9.999 8382	6	10	
34	0	8.436 7999	7691	8.436 9622	7698	1.563 0378	9.999 8376	6	0	26
	10	8.437 5690	7678	8.437 7320	7683	1.562 2680	9.999 8370	5	50	
	20	8.438 3368	7664	8.438 5003	7670	1.561 4997	9.999 8365	6	40	
	30	8.439 1032	7651	8.439 2673	7657	1.560 7327	9.999 8359	6	30	
	40	8.439 8683	7638	8.440 0330	7643	1.559 9670	9.999 8353	6	20	
	50	8.440 6321	7623	8.440 7973	7630	1.559 2027	9.999 8347	5	10	
35	0	8.441 3944	7611	8.441 5603	7616	1.558 4397	9.999 8342	6	0	25
	10	8.442 1555	7597	8.442 3219	7603	1.557 6781	9.999 8336	6	50	
	20	8.442 9152	7584	8.443 0822	7590	1.556 9178	9.999 8330	6	40	
	30	8.443 6736	7571	8.443 8412	7577	1.556 1588	9.999 8324	6	30	
	40	8.444 4307	7558	8.444 5989	7563	1.555 4011	9.999 8318	6	20	
	50	8.445 1865	7544	8.445 3552	7551	1.554 6448	9.999 8312	6	10	
36	0	8.445 9409	7531	8.446 1103	7537	1.553 8897	9.999 8306	5	0	24
	10	8.446 6940	7519	8.446 8640	7524	1.553 1360	9.999 8301	6	50	
	20	8.447 4459	7505	8.447 6164	7511	1.552 3836	9.999 8295	6	40	
	30	8.448 1964	7492	8.448 3675	7498	1.551 6325	9.999 8289	6	30	
	40	8.448 9456	7480	8.449 1173	7486	1.550 8827	9.999 8283	6	20	
	50	8.449 6936	7466	8.449 8659	7472	1.550 1341	9.999 8277	6	10	
37	0	8.450 4402	7454	8.450 6131	7460	1.549 3869	9.999 8271	6	0	23
	10	8.451 1856	7441	8.451 3591	7447	1.548 6409	9.999 8265	6	50	
	20	8.451 9297	7428	8.452 1038	7434	1.547 8962	9.999 8259	6	40	
	30	8.452 6725	7416	8.452 8472	7421	1.547 1528	9.999 8253	6	30	
	40	8.453 4141	7402	8.453 5893	7409	1.546 4107	9.999 8247	6	20	
	50	8.454 1543	7391	8.454 3302	7397	1.545 6698	9.999 8241	6	10	
38	0	8.454 8934	7377	8.455 0699	7383	1.544 9301	9.999 8235	6	0	22
	10	8.455 6311	7366	8.455 8082	7371	1.544 1918	9.999 8229	6	50	
	20	8.456 3677	7352	8.456 5453	7359	1.543 4547	9.999 8223	6	40	
	30	8.457 1029	7340	8.457 2812	7346	1.542 7188	9.999 8217	6	30	
	40	8.457 8369	7328	8.458 0158	7334	1.541 9842	9.999 8211	6	20	
	50	8.458 5697	7316	8.458 7492	7322	1.541 2508	9.999 8205	6	10	
39	0	8.459 3013	7303	8.459 4814	7309	1.540 5186	9.999 8199	6	0	21
	10	8.460 0316	7291	8.460 2123	7297	1.539 7877	9.999 8193	6	50	
	20	8.460 7607	7279	8.460 9420	7285	1.539 0580	9.999 8187	6	40	
	30	8.461 4886	7266	8.461 6705	7273	1.538 3295	9.999 8181	6	30	
	40	8.462 2152	7254	8.462 3978	7260	1.537 6022	9.999 8175	7	20	
	50	8.462 9406	7243	8.463 1238	7248	1.536 8762	9.999 8168	6	10	
40	0	8.463 6649		8.463 8486		1.536 1514	9.999 8162		0	20
'	"	Cos	d.	Cotg	d.	Tang	Sin	d.	"	'

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	8.463 6649	7230	8.463 8486	7237	1.536 1514	9.999 8162	6	0	20
	10	8.464 3879	7218	8.464 5723	7224	1.535 4277	9.999 8156	6	50	
	20	8.465 1097	7206	8.465 2947	7212	1.534 7053	9.999 8150	6	40	
	30	8.465 8303	7194	8.466 0159	7201	1.533 9841	9.999 8144	6	30	
	40	8.466 5497	7183	8.466 7360	7188	1.533 2640	9.999 8138	6	20	
	50	8.467 2680	7170	8.467 4548	7177	1.532 5452	9.999 8132	7	10	
41	0	8.467 9850	7159	8.468 1725	7165	1.531 8275	9.999 8125	6	0	19
	10	8.468 7009	7147	8.468 8890	7153	1.531 1110	9.999 8119	6	50	
	20	8.469 4156	7135	8.469 6043	7141	1.530 3957	9.999 8113	6	40	
	30	8.470 1291	7123	8.470 3184	7129	1.529 6816	9.999 8107	6	30	
	40	8.470 8414	7112	8.471 0313	7118	1.528 9687	9.999 8101	7	20	
	50	8.471 5526	7100	8.471 7431	7107	1.528 2569	9.999 8094	6	10	
42	0	8.472 2626	7088	8.472 4538	7094	1.527 5462	9.999 8088	6	0	18
	10	8.472 9714	7077	8.473 1632	7083	1.526 8368	9.999 8082	6	50	
	20	8.473 6791	7065	8.473 8715	7072	1.526 1285	9.999 8076	7	40	
	30	8.474 3856	7054	8.474 5787	7060	1.525 4213	9.999 8069	6	30	
	40	8.475 0910	7043	8.475 2847	7049	1.524 7153	9.999 8063	6	20	
	50	8.475 7953	7031	8.475 9896	7037	1.524 0104	9.999 8057	7	10	
43	0	8.476 4984	7019	8.476 6933	7026	1.523 3067	9.999 8050	6	0	17
	10	8.477 2003	7009	8.477 3959	7015	1.522 6041	9.999 8044	6	50	
	20	8.477 9012	6997	8.478 0974	7003	1.521 9026	9.999 8038	7	40	
	30	8.478 6009	6985	8.478 7977	6992	1.521 2023	9.999 8031	6	30	
	40	8.479 2994	6975	8.479 4969	6981	1.520 5031	9.999 8025	6	20	
	50	8.479 9969	6963	8.480 1950	6970	1.519 8050	9.999 8019	7	10	
44	0	8.480 6932	6952	8.480 8920	6958	1.519 1080	9.999 8012	6	0	16
	10	8.481 3884	6941	8.481 5878	6948	1.518 4122	9.999 8006	6	50	
	20	8.482 0825	6930	8.482 2826	6936	1.517 7174	9.999 8000	7	40	
	30	8.482 7755	6919	8.482 9762	6925	1.517 0238	9.999 7993	6	30	
	40	8.483 4674	6908	8.483 6687	6915	1.516 3313	9.999 7987	7	20	
	50	8.484 1582	6897	8.484 3602	6903	1.515 6398	9.999 7980	6	10	
45	0	8.484 8479	6886	8.485 0505	6892	1.514 9495	9.999 7974	6	0	15
	10	8.485 5365	6875	8.485 7397	6882	1.514 2603	9.999 7968	7	50	
	20	8.486 2240	6864	8.486 4279	6870	1.513 5721	9.999 7961	6	40	
	30	8.486 9104	6853	8.487 1149	6860	1.512 8851	9.999 7955	7	30	
	40	8.487 5957	6843	8.487 8009	6849	1.512 1991	9.999 7948	6	20	
	50	8.488 2800	6832	8.488 4858	6838	1.511 5142	9.999 7942	7	10	
46	0	8.488 9632	6821	8.489 1696	6828	1.510 8304	9.999 7935	6	0	14
	10	8.489 6453	6810	8.489 8524	6817	1.510 1476	9.999 7929	7	50	
	20	8.490 3263	6800	8.490 5341	6806	1.509 4659	9.999 7922	6	40	
	30	8.491 0063	6789	8.491 2147	6795	1.508 7853	9.999 7916	7	30	
	40	8.491 6852	6778	8.491 8942	6785	1.508 1058	9.999 7909	6	20	
	50	8.492 3630	6768	8.492 5727	6775	1.507 4273	9.999 7903	7	10	
47	0	8.493 0398	6757	8.493 2502	6764	1.506 7498	9.999 7896	7	0	13
	10	8.493 7155	6747	8.493 9266	6753	1.506 0734	9.999 7889	6	50	
	20	8.494 3902	6736	8.494 6019	6743	1.505 3981	9.999 7883	7	40	
	30	8.495 0638	6726	8.495 2762	6732	1.504 7238	9.999 7876	6	30	
	40	8.495 7364	6715	8.495 9494	6722	1.504 0506	9.999 7870	7	20	
	50	8.496 4079	6705	8.496 6216	6712	1.503 3784	9.999 7863	7	10	
48	0	8.497 0784	6695	8.497 2928	6701	1.502 7072	9.999 7856	6	0	12
	10	8.497 7479	6684	8.497 9629	6691	1.502 0371	9.999 7850	7	50	
	20	8.498 4163	6675	8.498 6320	6681	1.501 3680	9.999 7843	6	40	
	30	8.499 0838	6663	8.499 3001	6670	1.500 6999	9.999 7837	7	30	
	40	8.499 7501	6654	8.499 9671	6661	1.500 0329	9.999 7830	7	20	
	50	8.500 4155	6643	8.500 6332	6650	1.499 3668	9.999 7823	6	10	
49	0	8.501 0798	6634	8.501 2982	6640	1.498 7018	9.999 7817	7	0	11
	10	8.501 7432	6623	8.501 9622	6630	1.498 0378	9.999 7810	7	50	
	20	8.502 4055	6613	8.502 6252	6619	1.497 3748	9.999 7803	6	40	
	30	8.503 0668	6603	8.503 2871	6610	1.496 7129	9.999 7797	7	30	
	40	8.503 7271	6593	8.503 9481	6600	1.496 0519	9.999 7790	7	20	
	50	8.504 3864	6583	8.504 6081	6590	1.495 3919	9.999 7783	7	10	
50	0	8.505 0447		8.505 2671		1.494 7329	9.999 7776		0	10
'	"	Cos	d.	Cotg	d.	Tang	Sin	d.	"	'

88°

1°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	8.505 0447	6573	8.505 2671	6579	1.494 7329	9.999 7776	6	0	10
	10	8.505 7020	6563	8.505 9250	6570	1.494 0750	9.999 7770	7	50	
	20	8.506 3583	6553	8.506 5820	6560	1.493 4180	9.999 7763	7	40	
	30	8.507 0136	6543	8.507 2380	6550	1.492 7620	9.999 7756	7	30	
	40	8.507 6679	6534	8.507 8930	6540	1.492 1070	9.999 7749	6	20	
	50	8.508 3213	6523	8.508 5470	6531	1.491 4530	9.999 7743	7	10	
51	0	8.508 9736	6514	8.509 2001	6520	1.490 7999	9.999 7736	7	0	9
	10	8.509 6250	6504	8.509 8521	6511	1.490 1479	9.999 7729	7	50	
	20	8.510 2754	6494	8.510 5032	6501	1.489 4968	9.999 7722	7	40	
	30	8.510 9248	6485	8.511 1533	6492	1.488 8467	9.999 7715	7	30	
	40	8.511 5733	6475	8.511 8025	6481	1.488 1975	9.999 7708	6	20	
	50	8.512 2208	6465	8.512 4506	6472	1.487 5494	9.999 7702	7	10	
52	0	8.512 8673	6456	8.513 0978	6463	1.486 9022	9.999 7695	7	0	8
	10	8.513 5129	6446	8.513 7441	6453	1.486 2559	9.999 7688	7	50	
	20	8.514 1575	6436	8.514 3894	6443	1.485 6106	9.999 7681	7	40	
	30	8.514 8011	6427	8.515 0337	6434	1.484 9663	9.999 7674	7	30	
	40	8.515 4438	6418	8.515 6771	6424	1.484 3229	9.999 7667	7	20	
	50	8.516 0856	6408	8.516 3195	6415	1.483 6805	9.999 7660	7	10	
53	0	8.516 7264	6398	8.516 9610	6406	1.483 0390	9.999 7653	7	0	7
	10	8.517 3662	6389	8.517 6016	6396	1.482 3984	9.999 7646	6	50	
	20	8.518 0051	6380	8.518 2412	6386	1.481 7588	9.999 7640	7	40	
	30	8.518 6431	6370	8.518 8798	6377	1.481 1202	9.999 7633	7	30	
	40	8.519 2801	6361	8.519 5175	6368	1.480 4825	9.999 7626	7	20	
	50	8.519 9162	6352	8.520 1543	6359	1.479 8457	9.999 7619	7	10	
54	0	8.520 5514	6342	8.520 7902	6349	1.479 2098	9.999 7612	7	0	6
	10	8.521 1856	6333	8.521 4251	6340	1.478 5749	9.999 7605	7	50	
	20	8.521 8189	6324	8.522 0591	6331	1.477 9409	9.999 7598	7	40	
	30	8.522 4513	6315	8.522 6922	6322	1.477 3078	9.999 7591	7	30	
	40	8.523 0828	6305	8.523 3244	6313	1.476 6756	9.999 7584	7	20	
	50	8.523 7133	6297	8.523 9557	6303	1.476 0443	9.999 7577	7	10	
55	0	8.524 3430	6287	8.524 5860	6294	1.475 4140	9.999 7570	7	0	5
	10	8.524 9717	6278	8.525 2154	6285	1.474 7846	9.999 7563	8	50	
	20	8.525 5995	6269	8.525 8439	6277	1.474 1561	9.999 7555	7	40	
	30	8.526 2264	6260	8.526 4716	6267	1.473 5284	9.999 7548	7	30	
	40	8.526 8524	6251	8.527 0983	6258	1.472 9017	9.999 7541	7	20	
	50	8.527 4775	6242	8.527 7241	6249	1.472 2759	9.999 7534	7	10	
56	0	8.528 1017	6233	8.528 3490	6240	1.471 6510	9.999 7527	7	0	4
	10	8.528 7250	6224	8.528 9730	6231	1.471 0270	9.999 7520	7	50	
	20	8.529 3474	6215	8.529 5961	6222	1.470 4039	9.999 7513	7	40	
	30	8.529 9689	6206	8.530 2183	6214	1.469 7817	9.999 7506	7	30	
	40	8.530 5895	6198	8.530 8397	6204	1.469 1603	9.999 7499	8	20	
	50	8.531 2093	6188	8.531 4601	6196	1.468 5399	9.999 7491	7	10	
57	0	8.531 8281	6180	8.532 0797	6187	1.467 9203	9.999 7484	7	0	3
	10	8.532 4461	6171	8.532 6984	6178	1.467 3016	9.999 7477	7	50	
	20	8.533 0632	6162	8.533 3162	6169	1.466 6838	9.999 7470	7	40	
	30	8.533 6794	6154	8.533 9331	6161	1.466 0669	9.999 7463	7	30	
	40	8.534 2948	6144	8.534 5492	6152	1.465 4508	9.999 7456	8	20	
	50	8.534 9092	6136	8.535 1644	6143	1.464 8356	9.999 7448	7	10	
58	0	8.535 5228	6128	8.535 7787	6135	1.464 2213	9.999 7441	7	0	2
	10	8.536 1356	6118	8.536 3922	6126	1.463 6078	9.999 7434	7	50	
	20	8.536 7474	6111	8.537 0048	6117	1.462 9952	9.999 7427	8	40	
	30	8.537 3585	6101	8.537 6165	6109	1.462 3835	9.999 7419	7	30	
	40	8.537 9686	6093	8.538 2274	6100	1.461 7726	9.999 7412	7	20	
	50	8.538 5779	6084	8.538 8374	6092	1.461 1626	9.999 7405	7	10	
59	0	8.539 1863	6076	8.539 4466	6083	1.460 5534	9.999 7398	8	0	1
	10	8.539 7939	6068	8.540 0549	6075	1.459 9451	9.999 7390	7	50	
	20	8.540 4007	6059	8.540 6624	6066	1.459 3376	9.999 7383	7	40	
	30	8.541 0066	6050	8.541 2690	6058	1.458 7310	9.999 7376	8	30	
	40	8.541 6116	6042	8.541 8748	6049	1.458 1252	9.999 7368	7	20	
	50	8.542 2158	6034	8.542 4797	6041	1.457 5203	9.999 7361	7	10	
60	0	8.542 8192		8.543 0838		1.456 9162	9.999 7354		0	0
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

88°

2°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	8.542 8192	6025	8.543 0838	6033	1.456 9162	9.999 7354	8	0	60
	10	8.543 4217	6017	8.543 6871	6024	1.456 3129	9.999 7346	7	50	
	20	8.544 0234	6008	8.544 2895	6016	1.455 7105	9.999 7339	8	40	
	30	8.544 6242	6001	8.544 8911	6007	1.455 1089	9.999 7331	7	30	
	40	8.545 2243	5991	8.545 4918	6000	1.454 5082	9.999 7324	7	20	
	50	8.545 8234	5984	8.546 0918	5991	1.453 9082	9.999 7317	8	10	
1	0	8.546 4218	5976	8.546 6909	5983	1.453 3091	9.999 7309	7	0	59
	10	8.547 0194	5967	8.547 2892	5974	1.452 7108	9.999 7302	8	50	
	20	8.547 6161	5959	8.547 8866	5967	1.452 1134	9.999 7294	7	40	
	30	8.548 2120	5951	8.548 4833	5958	1.451 5167	9.999 7287	7	30	
	40	8.548 8071	5942	8.549 0791	5950	1.450 9209	9.999 7280	8	20	
	50	8.549 4013	5935	8.549 6741	5942	1.450 3259	9.999 7272	7	10	
2	0	8.549 9948	5926	8.550 2683	5934	1.449 7317	9.999 7265	8	0	58
	10	8.550 5874	5919	8.550 8617	5926	1.449 1383	9.999 7257	7	50	
	20	8.551 1793	5910	8.551 4543	5918	1.448 5457	9.999 7250	8	40	
	30	8.551 7703	5902	8.552 0461	5910	1.447 9539	9.999 7242	7	30	
	40	8.552 3605	5894	8.552 6371	5901	1.447 3629	9.999 7235	8	20	
	50	8.552 9499	5887	8.553 2272	5894	1.446 7728	9.999 7227	7	10	
3	0	8.553 5386	5878	8.553 8166	5886	1.446 1834	9.999 7220	8	0	57
	10	8.554 1264	5870	8.554 4052	5878	1.445 5948	9.999 7212	8	50	
	20	8.554 7134	5863	8.554 9930	5870	1.445 0070	9.999 7204	7	40	
	30	8.555 2997	5854	8.555 5800	5862	1.444 4200	9.999 7197	8	30	
	40	8.555 8851	5847	8.556 1662	5854	1.443 8338	9.999 7189	7	20	
	50	8.556 4698	5838	8.556 7516	5846	1.443 2484	9.999 7182	8	10	
4	0	8.557 0536	5831	8.557 3362	5839	1.442 6638	9.999 7174	7	0	56
	10	8.557 6367	5823	8.557 9201	5830	1.442 0799	9.999 7167	8	50	
	20	8.558 2190	5815	8.558 5031	5823	1.441 4969	9.999 7159	8	40	
	30	8.558 8005	5808	8.559 0854	5815	1.440 9146	9.999 7151	7	30	
	40	8.559 3813	5799	8.559 6669	5807	1.440 3331	9.999 7144	8	20	
	50	8.559 9612	5792	8.560 2476	5800	1.439 7524	9.999 7136	8	10	
5	0	8.560 5404	5784	8.560 8276	5792	1.439 1724	9.999 7128	7	0	55
	10	8.561 1188	5777	8.561 4068	5784	1.438 5932	9.999 7121	8	50	
	20	8.561 6965	5769	8.561 9852	5776	1.438 0148	9.999 7113	8	40	
	30	8.562 2734	5761	8.562 5628	5769	1.437 4372	9.999 7105	7	30	
	40	8.562 8495	5753	8.563 1397	5761	1.436 8603	9.999 7098	8	20	
	50	8.563 4248	5746	8.563 7158	5754	1.436 2842	9.999 7090	8	10	
6	0	8.563 9994	5738	8.564 2912	5746	1.435 7088	9.999 7082	7	0	54
	10	8.564 5732	5731	8.564 8658	5738	1.435 1342	9.999 7075	8	50	
	20	8.565 1463	5723	8.565 4396	5731	1.434 5604	9.999 7067	8	40	
	30	8.565 7186	5716	8.566 0127	5724	1.433 9873	9.999 7059	8	30	
	40	8.566 2902	5708	8.566 5851	5715	1.433 4149	9.999 7051	7	20	
	50	8.566 8610	5700	8.567 1566	5709	1.432 8434	9.999 7044	8	10	
7	0	8.567 4310	5694	8.567 7275	5701	1.432 2725	9.999 7036	8	0	53
	10	8.568 0004	5685	8.568 2976	5693	1.431 7024	9.999 7028	8	50	
	20	8.568 5689	5678	8.568 8669	5686	1.431 1331	9.999 7020	8	40	
	30	8.569 1367	5671	8.569 4355	5679	1.430 5645	9.999 7012	7	30	
	40	8.569 7038	5663	8.570 0034	5671	1.429 9966	9.999 7005	8	20	
	50	8.570 2701	5656	8.570 5705	5663	1.429 4295	9.999 6997	8	10	
8	0	8.570 8357	5649	8.571 1368	5657	1.428 8632	9.999 6989	8	0	52
	10	8.571 4006	5641	8.571 7025	5649	1.428 2975	9.999 6981	8	50	
	20	8.571 9647	5634	8.572 2674	5642	1.427 7326	9.999 6973	8	40	
	30	8.572 5281	5627	8.572 8316	5634	1.427 1684	9.999 6965	8	30	
	40	8.573 0908	5619	8.573 3950	5627	1.426 6050	9.999 6957	7	20	
	50	8.573 6527	5612	8.573 9577	5620	1.426 0423	9.999 6950	8	10	
9	0	8.574 2139	5605	8.574 5197	5613	1.425 4803	9.999 6942	8	0	51
	10	8.574 7744	5597	8.575 0810	5606	1.424 9190	9.999 6934	8	50	
	20	8.575 3341	5591	8.575 6416	5598	1.424 3584	9.999 6926	8	40	
	30	8.575 8932	5583	8.576 2014	5591	1.423 7986	9.999 6918	8	30	
	40	8.576 4515	5576	8.576 7605	5584	1.423 2395	9.999 6910	8	20	
	50	8.577 0091	5569	8.577 3189	5577	1.422 6811	9.999 6902	8	10	
10	0	8.577 5660		8.577 8766		1.422 1234	9.999 6894		0	50
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

87°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	8.577 5660	5561	8.577 8766	5569	1.422 1234	9.999 6894	8	0	50
	10	8.578 1221	5555	8.578 4335	5563	1.421 5665	9.999 6886	8	50	
	20	8.578 6776	5547	8.578 9898	5555	1.421 0102	9.999 6878	8	40	
	30	8.579 2323	5541	8.579 5453	5548	1.420 4547	9.999 6870	8	30	
	40	8.579 7864	5533	8.580 1001	5542	1.419 8999	9.999 6862	8	20	
	50	8.580 3397	5526	8.580 6543	5534	1.419 3457	9.999 6854	8	10	
11	0	8.580 8923	5519	8.581 2077	5527	1.418 7923	9.999 6846	8	0	49
	10	8.581 4442	5512	8.581 7604	5520	1.418 2396	9.999 6838	8	50	
	20	8.581 9954	5506	8.582 3124	5514	1.417 6876	9.999 6830	8	40	
	30	8.582 5460	5498	8.582 8638	5506	1.417 1362	9.999 6822	8	30	
	40	8.583 0958	5491	8.583 4144	5499	1.416 5856	9.999 6814	8	20	
	50	8.583 6449	5484	8.583 9643	5493	1.416 0357	9.999 6806	8	10	
12	0	8.584 1933	5478	8.584 5136	5485	1.415 4864	9.999 6798	8	0	48
	10	8.584 7411	5470	8.585 0621	5479	1.414 9379	9.999 6790	8	50	
	20	8.585 2881	5464	8.585 6100	5471	1.414 3900	9.999 6782	9	40	
	30	8.585 8345	5456	8.586 1571	5465	1.413 8429	9.999 6773	8	30	
	40	8.586 3801	5450	8.586 7036	5458	1.413 2964	9.999 6765	8	20	
	50	8.586 9251	5443	8.587 2494	5451	1.412 7506	9.999 6757	8	10	
13	0	8.587 4694	5436	8.587 7945	5444	1.412 2055	9.999 6749	8	0	47
	10	8.588 0130	5430	8.588 3389	5438	1.411 6611	9.999 6741	8	50	
	20	8.588 5560	5422	8.588 8827	5431	1.411 1173	9.999 6733	9	40	
	30	8.589 0982	5416	8.589 4258	5424	1.410 5742	9.999 6724	8	30	
	40	8.589 6398	5409	8.589 9682	5417	1.410 0318	9.999 6716	8	20	
	50	8.590 1807	5402	8.590 5099	5410	1.409 4901	9.999 6708	8	10	
14	0	8.590 7209	5396	8.591 0509	5404	1.408 9491	9.999 6700	8	0	46
	10	8.591 2605	5389	8.591 5913	5397	1.408 4087	9.999 6692	9	50	
	20	8.591 7994	5382	8.592 1310	5391	1.407 8690	9.999 6683	8	40	
	30	8.592 3376	5375	8.592 6701	5384	1.407 3299	9.999 6675	8	30	
	40	8.592 8751	5369	8.593 2085	5377	1.406 7915	9.999 6667	8	20	
	50	8.593 4120	5363	8.593 7462	5370	1.406 2538	9.999 6659	9	10	
15	0	8.593 9483	5355	8.594 2832	5364	1.405 7168	9.999 6650	8	0	45
	10	8.594 4838	5349	8.594 8196	5357	1.405 1804	9.999 6642	8	50	
	20	8.595 0187	5343	8.595 3553	5351	1.404 6447	9.999 6634	8	40	
	30	8.595 5530	5335	8.595 8904	5344	1.404 1096	9.999 6626	9	30	
	40	8.596 0865	5330	8.596 4248	5338	1.403 5752	9.999 6617	8	20	
	50	8.596 6195	5322	8.596 9586	5331	1.403 0414	9.999 6609	8	10	
16	0	8.597 1517	5317	8.597 4917	5324	1.402 5083	9.999 6601	9	0	44
	10	8.597 6834	5309	8.598 0241	5318	1.401 9759	9.999 6592	8	50	
	20	8.598 2143	5303	8.598 5559	5312	1.401 4441	9.999 6584	8	40	
	30	8.598 7446	5297	8.599 0871	5305	1.400 9129	9.999 6576	9	30	
	40	8.599 2743	5290	8.599 6176	5299	1.400 3824	9.999 6567	8	20	
	50	8.599 8033	5284	8.600 1475	5292	1.399 8525	9.999 6559	9	10	
17	0	8.600 3317	5278	8.600 6767	5286	1.399 3233	9.999 6550	8	0	43
	10	8.600 8595	5271	8.601 2053	5279	1.398 7947	9.999 6542	8	50	
	20	8.601 3866	5264	8.601 7332	5273	1.398 2668	9.999 6534	9	40	
	30	8.601 9130	5258	8.602 2605	5267	1.397 7395	9.999 6525	8	30	
	40	8.602 4388	5252	8.602 7872	5260	1.397 2128	9.999 6517	9	20	
	50	8.602 9640	5246	8.603 3132	5254	1.396 6868	9.999 6508	8	10	
18	0	8.603 4886	5239	8.603 8386	5247	1.396 1614	9.999 6500	9	0	42
	10	8.604 0125	5232	8.604 3633	5242	1.395 6367	9.999 6491	8	50	
	20	8.604 5357	5227	8.604 8875	5235	1.395 1125	9.999 6483	9	40	
	30	8.605 0584	5220	8.605 4110	5228	1.394 5890	9.999 6474	8	30	
	40	8.605 5804	5214	8.605 9338	5223	1.394 0662	9.999 6466	9	20	
	50	8.606 1018	5208	8.606 4561	5216	1.393 5439	9.999 6457	8	10	
19	0	8.606 6226	5201	8.606 9777	5210	1.393 0223	9.999 6449	9	0	41
	10	8.607 1427	5195	8.607 4987	5203	1.392 5013	9.999 6440	8	50	
	20	8.607 6622	5189	8.608 0190	5198	1.391 9810	9.999 6432	9	40	
	30	8.608 1811	5183	8.608 5388	5191	1.391 4612	9.999 6423	8	30	
	40	8.608 6994	5177	8.609 0579	5185	1.390 9421	9.999 6415	9	20	
	50	8.609 2171	5170	8.609 5764	5179	1.390 4236	9.999 6406	8	10	
20	0	8.609 7341		8.610 0943		1.389 9057	9.999 6398		0	40
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

2°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	8.609 7341	5164	8.610 0943	5173	1.389 9057	9.999 6398	9	0	40
	10	8.610 2505	5158	8.610 6116	5167	1.389 3884	9.999 6389	9	50	
	20	8.610 7663	5152	8.611 1283	5160	1.388 8717	9.999 6380	8	40	
	30	8.611 2815	5146	8.611 6443	5155	1.388 3557	9.999 6372	9	30	
	40	8.611 7961	5140	8.612 1598	5148	1.387 8402	9.999 6363	8	20	
	50	8.612 3101	5134	8.612 6746	5143	1.387 3254	9.999 6355	9	10	
21	0	8.612 8235	5127	8.613 1889	5136	1.386 8111	9.999 6346	9	0	39
	10	8.613 3362	5122	8.613 7025	5130	1.386 2975	9.999 6337	8	50	
	20	8.613 8484	5115	8.614 2155	5124	1.385 7845	9.999 6329	9	40	
	30	8.614 3599	5110	8.614 7279	5118	1.385 2721	9.999 6320	9	30	
	40	8.614 8709	5103	8.615 2397	5112	1.384 7603	9.999 6311	8	20	
	50	8.615 3812	5098	8.615 7509	5107	1.384 2491	9.999 6303	9	10	
22	0	8.615 8910	5091	8.616 2616	5100	1.383 7384	9.999 6294	9	0	38
	10	8.616 4001	5086	8.616 7716	5094	1.383 2284	9.999 6285	8	50	
	20	8.616 9087	5079	8.617 2810	5088	1.382 7190	9.999 6277	9	40	
	30	8.617 4166	5074	8.617 7898	5083	1.382 2102	9.999 6268	9	30	
	40	8.617 9240	5067	8.618 2981	5076	1.381 7019	9.999 6259	9	20	
	50	8.618 4307	5062	8.618 8057	5070	1.381 1943	9.999 6250	8	10	
23	0	8.618 9369	5056	8.619 3127	5065	1.380 6873	9.999 6242	9	0	37
	10	8.619 4425	5050	8.619 8192	5059	1.380 1808	9.999 6233	9	50	
	20	8.619 9475	5044	8.620 3251	5053	1.379 6749	9.999 6224	9	40	
	30	8.620 4519	5038	8.620 8304	5047	1.379 1696	9.999 6215	9	30	
	40	8.620 9557	5032	8.621 3351	5041	1.378 6649	9.999 6206	8	20	
	50	8.621 4589	5027	8.621 8392	5035	1.378 1608	9.999 6198	9	10	
24	0	8.621 9616	5021	8.622 3427	5030	1.377 6573	9.999 6189	9	0	36
	10	8.622 4637	5015	8.622 8457	5023	1.377 1543	9.999 6180	9	50	
	20	8.622 9652	5009	8.623 3480	5018	1.376 6520	9.999 6171	9	40	
	30	8.623 4661	5003	8.623 8498	5013	1.376 1502	9.999 6162	9	30	
	40	8.623 9664	4998	8.624 3511	5006	1.375 6489	9.999 6153	8	20	
	50	8.624 4662	4991	8.624 8517	5001	1.375 1483	9.999 6145	9	10	
25	0	8.624 9653	4986	8.625 3518	4995	1.374 6482	9.999 6136	9	0	35
	10	8.625 4639	4981	8.625 8513	4989	1.374 1487	9.999 6127	9	50	
	20	8.625 9620	4974	8.626 3502	4983	1.373 6498	9.999 6118	9	40	
	30	8.626 4594	4969	8.626 8485	4978	1.373 1515	9.999 6109	9	30	
	40	8.626 9563	4964	8.627 3463	4972	1.372 6537	9.999 6100	9	20	
	50	8.627 4527	4957	8.627 8435	4967	1.372 1565	9.999 6091	9	10	
26	0	8.627 9484	4952	8.628 3402	4961	1.371 6598	9.999 6082	9	0	34
	10	8.628 4436	4946	8.628 8363	4955	1.371 1637	9.999 6073	9	50	
	20	8.628 9382	4941	8.629 3318	4950	1.370 6682	9.999 6064	9	40	
	30	8.629 4323	4935	8.629 8268	4943	1.370 1732	9.999 6055	9	30	
	40	8.629 9258	4929	8.630 3211	4939	1.369 6789	9.999 6046	9	20	
	50	8.630 4187	4924	8.630 8150	4933	1.369 1850	9.999 6037	9	10	
27	0	8.630 9111	4918	8.631 3083	4927	1.368 6917	9.999 6028	9	0	33
	10	8.631 4029	4913	8.631 8010	4921	1.368 1990	9.999 6019	9	50	
	20	8.631 8942	4907	8.632 2931	4917	1.367 7069	9.999 6010	9	40	
	30	8.632 3849	4901	8.632 7848	4910	1.367 2152	9.999 6001	9	30	
	40	8.632 8750	4896	8.633 2758	4905	1.366 7242	9.999 5992	9	20	
	50	8.633 3646	4891	8.633 7663	4900	1.366 2337	9.999 5983	9	10	
28	0	8.633 8537	4885	8.634 2563	4894	1.365 7437	9.999 5974	9	0	32
	10	8.634 3422	4879	8.634 7457	4888	1.365 2543	9.999 5965	9	50	
	20	8.634 8301	4874	8.635 2345	4883	1.364 7655	9.999 5956	9	40	
	30	8.635 3175	4868	8.635 7228	4878	1.364 2772	9.999 5947	9	30	
	40	8.635 8043	4863	8.636 2106	4872	1.363 7894	9.999 5938	9	20	
	50	8.636 2906	4858	8.636 6978	4867	1.363 3022	9.999 5929	10	10	
29	0	8.636 7764	4852	8.637 1845	4861	1.362 8155	9.999 5919	9	0	31
	10	8.637 2616	4847	8.637 6706	4856	1.362 3294	9.999 5910	9	50	
	20	8.637 7463	4841	8.638 1562	4850	1.361 8438	9.999 5901	9	40	
	30	8.638 2304	4836	8.638 6412	4845	1.361 3588	9.999 5892	9	30	
	40	8.638 7140	4831	8.639 1257	4840	1.360 8743	9.999 5883	9	20	
	50	8.639 1971	4825	8.639 6097	4834	1.360 3903	9.999 5874	9	10	
30	0	8 639 6796		8.640 0931		1.359 9069	9.999 5865		0	30
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

87°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	8.639 6796	4819	8.640 0931	4829	1.359 9069	9.999 5865	10	0	30
	10	8.640 1615	4815	8.640 5760	4824	1.359 4240	9.999 5855	9	50	
	20	8.640 6430	4809	8.641 0584	4818	1.358 9416	9.999 5846	9	40	
	30	8.641 1239	4804	8.641 5402	4813	1.358 4598	9.999 5837	9	30	
	40	8.641 6043	4798	8.642 0215	4808	1.357 9785	9.999 5828	10	20	
	50	8.642 0841	4793	8.642 5023	4802	1.357 4977	9.999 5818	9	10	
31	0	8.642 5634	4788	8.642 9825	4797	1.357 0175	9.999 5809	9	0	29
	10	8.643 0422	4782	8.643 4622	4792	1.356 5378	9.999 5800	9	50	
	20	8.643 5204	4778	8.643 9414	4786	1.356 0586	9.999 5791	10	40	
	30	8.643 9982	4772	8.644 4200	4782	1.355 5800	9.999 5781	9	30	
	40	8.644 4754	4766	8.644 8982	4776	1.355 1018	9.999 5772	9	20	
	50	8.644 9520	4762	8.645 3758	4770	1.354 6242	9.999 5763	10	10	
32	0	8.645 4282	4756	8.645 8528	4766	1.354 1472	9.999 5753	9	0	28
	10	8.645 9038	4751	8.646 3294	4760	1.353 6706	9.999 5744	9	50	
	20	8.646 3789	4746	8.646 8054	4756	1.353 1946	9.999 5735	10	40	
	30	8.646 8535	4741	8.647 2810	4750	1.352 7190	9.999 5725	9	30	
	40	8.647 3276	4735	8.647 7560	4745	1.352 2440	9.999 5716	9	20	
	50	8.647 8011	4731	8.648 2305	4739	1.351 7695	9.999 5707	10	10	
33	0	8.648 2742	4725	8.648 7044	4735	1.351 2956	9.999 5697	9	0	27
	10	8.648 7467	4720	8.649 1779	4729	1.350 8221	9.999 5688	9	50	
	20	8.649 2187	4715	8.649 6508	4725	1.350 3492	9.999 5679	10	40	
	30	8.649 6902	4710	8.650 1233	4719	1.349 8767	9.999 5669	9	30	
	40	8.650 1612	4704	8.650 5952	4714	1.349 4048	9.999 5660	10	20	
	50	8.650 6316	4700	8.651 0666	4709	1.348 9334	9.999 5650	9	10	
34	0	8.651 1016	4694	8.651 5375	4704	1.348 4625	9.999 5641	10	0	26
	10	8.651 5710	4690	8.652 0079	4699	1.347 9921	9.999 5631	9	50	
	20	8.652 0400	4684	8.652 4778	4693	1.347 5222	9.999 5622	9	40	
	30	8.652 5084	4679	8.652 9471	4689	1.347 0529	9.999 5613	10	30	
	40	8.652 9763	4674	8.653 4160	4684	1.346 5840	9.999 5603	9	20	
	50	8.653 4437	4670	8.653 8844	4678	1.346 1156	9.999 5594	10	10	
35	0	8.653 9107	4664	8.654 3522	4674	1.345 6478	9.999 5584	9	0	25
	10	8.654 3771	4659	8.654 8196	4669	1.345 1804	9.999 5575	10	50	
	20	8.654 8430	4654	8.655 2865	4663	1.344 7135	9.999 5565	9	40	
	30	8.655 3084	4649	8.655 7528	4659	1.344 2472	9.999 5556	10	30	
	40	8.655 7733	4644	8.656 2187	4654	1.343 7813	9.999 5546	10	20	
	50	8.656 2377	4640	8.656 6841	4649	1.343 3159	9.999 5536	9	10	
36	0	8.656 7017	4634	8.657 1490	4643	1.342 8510	9.999 5527	10	0	24
	10	8.657 1651	4629	8.657 6133	4639	1.342 3867	9.999 5517	9	50	
	20	8.657 6280	4624	8.658 0772	4634	1.341 9228	9.999 5508	10	40	
	30	8.658 0904	4620	8.658 5406	4629	1.341 4594	9.999 5498	9	30	
	40	8.658 5524	4614	8.659 0035	4624	1.340 9965	9.999 5489	10	20	
	50	8.659 0138	4610	8.659 4659	4620	1.340 5341	9.999 5479	10	10	
37	0	8.659 4748	4605	8.659 9279	4614	1.340 0721	9.999 5469	9	0	23
	10	8.659 9353	4599	8.660 3893	4609	1.339 6107	9.999 5460	10	50	
	20	8.660 3952	4595	8.660 8502	4605	1.339 1498	9.999 5450	10	40	
	30	8.660 8547	4590	8.661 3107	4600	1.338 6893	9.999 5440	9	30	
	40	8.661 3137	4586	8.661 7707	4594	1.338 2293	9.999 5431	10	20	
	50	8.661 7723	4580	8.662 2301	4590	1.337 7699	9.999 5421	10	10	
38	0	8.662 2303	4575	8.662 6891	4586	1.337 3109	9.999 5411	9	0	22
	10	8.662 6878	4571	8.663 1477	4580	1.336 8523	9.999 5402	10	50	
	20	8.663 1449	4566	8.663 6057	4576	1.336 3943	9.999 5392	10	40	
	30	8.663 6015	4561	8.664 0633	4570	1.335 9367	9.999 5382	9	30	
	40	8.664 0576	4556	8.664 5203	4567	1.335 4797	9.999 5373	10	20	
	50	8.664 5132	4552	8.664 9770	4561	1.335 0230	9.999 5363	10	10	
39	0	8.664 9684	4547	8.665 4331	4556	1.334 5669	9.999 5353	10	0	21
	10	8.665 4231	4542	8.665 8887	4552	1.334 1113	9.999 5343	9	50	
	20	8.665 8773	4537	8.666 3439	4547	1.333 6561	9.999 5334	10	40	
	30	8.666 3310	4532	8.666 7986	4542	1.333 2014	9.999 5324	10	30	
	40	8.666 7842	4528	8.667 2528	4538	1.332 7472	9.999 5314	10	20	
	50	8.667 2370	4523	8.667 7066	4532	1.332 2934	9.999 5304	9	10	
40	0	8.667 6893		8.668 1598		1.331 8402	9.999 5295		0	20
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

2°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	8.667 6893	4518	8.668 1598	4529	1.331 8402	9.999 5295	10	0	20
	10	8.668 1411	4514	8.668 6127	4523	1.331 3873	9.999 5285	10	50	
	20	8.668 5925	4509	8.669 0650	4519	1.330 9350	9.999 5275	10	40	
	30	8.669 0434	4504	8.669 5169	4514	1.330 4831	9.999 5265	10	30	
	40	8.669 4938	4499	8.669 9683	4509	1.330 0317	9.999 5255	10	20	
	50	8.669 9437	4495	8.670 4192	4505	1.329 5808	9.999 5245	9	10	
41	0	8.670 3932	4490	8.670 8697	4500	1.329 1303	9.999 5236	10	0	19
	10	8.670 8422	4486	8.671 3197	4495	1.328 6803	9.999 5226	10	50	
	20	8.671 2908	4481	8.671 7692	4491	1.328 2308	9.999 5216	10	40	
	30	8.671 7389	4476	8.672 2183	4486	1.327 7817	9.999 5206	10	30	
	40	8.672 1865	4472	8.672 6669	4482	1.327 3331	9.999 5196	10	20	
	50	8.672 6337	4467	8.673 1151	4477	1.326 8849	9.999 5186	10	10	
42	0	8.673 0804	4462	8.673 5628	4472	1.326 4372	9.999 5176	10	0	18
	10	8.673 5266	4458	8.674 0100	4468	1.325 9900	9.999 5166	10	50	
	20	8.673 9724	4453	8.674 4568	4463	1.325 5432	9.999 5156	10	40	
	30	8.674 4177	4449	8.674 9031	4459	1.325 0969	9.999 5146	10	30	
	40	8.674 8626	4444	8.675 3490	4454	1.324 6510	9.999 5136	10	20	
	50	8.675 3070	4440	8.675 7944	4449	1.324 2056	9.999 5126	10	10	
43	0	8.675 7510	4435	8.676 2393	4446	1.323 7607	9.999 5116	10	0	17
	10	8.676 1945	4430	8.676 6839	4440	1.323 3161	9.999 5106	10	50	
	20	8.676 6375	4426	8.677 1279	4436	1.322 8721	9.999 5096	10	40	
	30	8.677 0801	4422	8.677 5715	4432	1.322 4285	9.999 5086	10	30	
	40	8.677 5223	4417	8.678 0147	4426	1.321 9853	9.999 5076	10	20	
	50	8.677 9640	4412	8.678 4573	4423	1.321 5427	9.999 5066	10	10	
44	0	8.678 4052	4408	8.678 8996	4418	1.321 1004	9.999 5056	10	0	16
	10	8.678 8460	4404	8.679 3414	4414	1.320 6586	9.999 5046	10	50	
	20	8.679 2864	4399	8.679 7828	4409	1.320 2172	9.999 5036	10	40	
	30	8.679 7263	4394	8.680 2237	4404	1.319 7763	9.999 5026	10	30	
	40	8.680 1657	4390	8.680 6641	4401	1.319 3359	9.999 5016	10	20	
	50	8.680 6047	4386	8.681 1042	4395	1.318 8958	9.999 5006	10	10	
45	0	8.681 0433	4381	8.681 5437	4392	1.318 4563	9.999 4996	10	0	15
	10	8.681 4814	4377	8.681 9829	4387	1.318 0171	9.999 4986	11	50	
	20	8.681 9191	4372	8.682 4216	4382	1.317 5784	9.999 4975	10	40	
	30	8.682 3563	4368	8.682 8598	4378	1.317 1402	9.999 4965	10	30	
	40	8.682 7931	4364	8.683 2976	4374	1.316 7024	9.999 4955	10	20	
	50	8.683 2295	4359	8.683 7350	4369	1.316 2650	9.999 4945	10	10	
46	0	8.683 6654	4355	8.684 1719	4365	1.315 8281	9.999 4935	10	0	14
	10	8.684 1009	4350	8.684 6084	4361	1.315 3916	9.999 4925	11	50	
	20	8.684 5359	4347	8.685 0445	4356	1.314 9555	9.999 4914	10	40	
	30	8.684 9706	4341	8.685 4801	4352	1.314 5199	9.999 4904	10	30	
	40	8.685 4047	4338	8.685 9153	4348	1.314 0847	9.999 4894	10	20	
	50	8.685 8385	4333	8.686 3501	4343	1.313 6499	9.999 4884	10	10	
47	0	8.686 2718	4328	8.686 7844	4339	1.313 2156	9.999 4874	11	0	13
	10	8.686 7046	4325	8.687 2183	4335	1.312 7817	9.999 4863	10	50	
	20	8.687 1371	4320	8.687 6518	4330	1.312 3482	9.999 4853	10	40	
	30	8.687 5691	4316	8.688 0848	4326	1.311 9152	9.999 4843	10	30	
	40	8.688 0007	4311	8.688 5174	4322	1.311 4826	9.999 4833	11	20	
	50	8.688 4318	4307	8.688 9496	4317	1.311 0504	9.999 4822	10	10	
48	0	8.688 8625	4303	8.689 3813	4313	1.310 6187	9.999 4812	10	0	12
	10	8.689 2928	4299	8.689 8126	4309	1.310 1874	9.999 4802	11	50	
	20	8.689 7227	4294	8.690 2435	4305	1.309 7565	9.999 4791	10	40	
	30	8.690 1521	4290	8.690 6740	4301	1.309 3260	9.999 4781	10	30	
	40	8.690 5811	4286	8.691 1041	4296	1.308 8959	9.999 4771	11	20	
	50	8.691 0097	4282	8.691 5337	4292	1.308 4663	9.999 4760	10	10	
49	0	8.691 4379	4277	8.691 9629	4288	1.308 0371	9.999 4750	10	0	11
	10	8.691 8656	4273	8.692 3917	4283	1.307 6083	9.999 4740	11	50	
	20	8.692 2929	4269	8.692 8200	4279	1.307 1800	9.999 4729	10	40	
	30	8.692 7198	4265	8.693 2479	4276	1.306 7521	9.999 4719	10	30	
	40	8.693 1463	4261	8.693 6755	4271	1.306 3245	9.999 4709	11	20	
	50	8.693 5724	4256	8.694 1026	4266	1.305 8974	9.999 4698	10	10	
50	0	8.693 9980		8.694 5292		1.305 4708	9.999 4688		0	10
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

87°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	8.693 9980	4252	8.694 5292	4263	1.305 4708	9.999 4688	11	0	10
	10	8.694 4232	4248	8.694 9555	4259	1.305 0445	9.999 4677	10	50	
	20	8.694 8480	4244	8.695 3814	4254	1.304 6186	9.999 4667	11	40	
	30	8.695 2724	4240	8.695 8068	4250	1.304 1932	9.999 4656	10	30	
	40	8.695 6964	4236	8.696 2318	4246	1.303 7682	9.999 4646	11	20	
	50	8.696 1200	4231	8.696 6564	4242	1.303 3436	9.999 4635	10	10	
51	0	8.696 5431	4228	8.697 0806	4238	1.302 9194	9.999 4625	10	0	9
	10	8.696 9659	4223	8.697 5044	4234	1.302 4956	9.999 4615	11	50	
	20	8.697 3882	4219	8.697 9278	4229	1.302 0722	9.999 4604	10	40	
	30	8.697 8101	4215	8.698 3507	4226	1.301 6493	9.999 4594	11	30	
	40	8.698 2316	4211	8.698 7733	4221	1.301 2267	9.999 4583	11	20	
	50	8.698 6527	4207	8.699 1954	4218	1.300 8046	9.999 4572	10	10	
52	0	8.699 0734	4202	8.699 6172	4213	1.300 3828	9.999 4562	11	0	8
	10	8.699 4936	4199	8.700 0385	4209	1.299 9615	9.999 4551	10	50	
	20	8.699 9135	4195	8.700 4594	4205	1.299 5406	9.999 4541	11	40	
	30	8.700 3330	4190	8.700 8799	4201	1.299 1201	9.999 4530	10	30	
	40	8.700 7520	4187	8.701 3000	4197	1.298 7000	9.999 4520	11	20	
	50	8.701 1707	4182	8.701 7197	4193	1.298 2803	9.999 4509	11	10	
53	0	8.701 5889	4178	8.702 1390	4190	1.297 8610	9.999 4498	10	0	7
	10	8.702 0067	4175	8.702 5580	4185	1.297 4420	9.999 4488	11	50	
	20	8.702 4242	4170	8.702 9765	4181	1.297 0235	9.999 4477	10	40	
	30	8.702 8412	4166	8.703 3946	4176	1.296 6054	9.999 4467	11	30	
	40	8.703 2578	4163	8.703 8122	4173	1.296 1878	9.999 4456	11	20	
	50	8.703 6741	4158	8.704 2295	4170	1.295 7705	9.999 4445	10	10	
54	0	8.704 0899	4155	8.704 6465	4165	1.295 3535	9.999 4435	11	0	6
	10	8.704 5054	4150	8.705 0630	4161	1.294 9370	9.999 4424	11	50	
	20	8.704 9204	4146	8.705 4791	4157	1.294 5209	9.999 4413	10	40	
	30	8.705 3350	4143	8.705 8948	4153	1.294 1052	9.999 4403	11	30	
	40	8.705 7493	4138	8.706 3101	4149	1.293 6899	9.999 4392	11	20	
	50	8.706 1631	4135	8.706 7250	4145	1.293 2750	9.999 4381	11	10	
55	0	8.706 5766	4130	8.707 1395	4142	1.292 8605	9.999 4370	10	0	5
	10	8.706 9896	4127	8.707 5537	4137	1.292 4463	9.999 4360	11	50	
	20	8.707 4023	4123	8.707 9674	4134	1.292 0326	9.999 4349	11	40	
	30	8.707 8146	4119	8.708 3808	4129	1.291 6192	9.999 4338	10	30	
	40	8.708 2265	4115	8.708 7937	4126	1.291 2063	9.999 4328	11	20	
	50	8.708 6380	4110	8.709 2063	4122	1.290 7937	9.999 4317	11	10	
56	0	8.709 0490	4108	8.709 6185	4117	1.290 3815	9.999 4306	11	0	4
	10	8.709 4598	4103	8.710 0302	4114	1.289 9698	9.999 4295	11	50	
	20	8.709 8701	4099	8.710 4416	4111	1.289 5584	9.999 4284	10	40	
	30	8.710 2800	4096	8.710 8527	4106	1.289 1473	9.999 4274	11	30	
	40	8.710 6896	4091	8.711 2633	4102	1.288 7367	9.999 4263	11	20	
	50	8.711 0987	4088	8.711 6735	4099	1.288 3265	9.999 4252	11	10	
57	0	8.711 5075	4084	8.712 0834	4095	1.287 9166	9.999 4241	11	0	3
	10	8.711 9159	4080	8.712 4929	4090	1.287 5071	9.999 4230	11	50	
	20	8.712 3239	4076	8.712 9019	4087	1.287 0981	9.999 4219	11	40	
	30	8.712 7315	4072	8.713 3106	4084	1.286 6894	9.999 4208	10	30	
	40	8.713 1387	4069	8.713 7190	4079	1.286 2810	9.999 4198	11	20	
	50	8.713 5456	4064	8.714 1269	4076	1.285 8731	9.999 4187	11	10	
58	0	8.713 9520	4061	8.714 5345	4072	1.285 4655	9.999 4176	11	0	2
	10	8.714 3581	4057	8.714 9417	4068	1.285 0583	9.999 4165	11	50	
	20	8.714 7638	4054	8.715 3485	4064	1.284 6515	9.999 4154	11	40	
	30	8.715 1692	4049	8.715 7549	4060	1.284 2451	9.999 4143	11	30	
	40	8.715 5741	4046	8.716 1609	4057	1.283 8391	9.999 4132	11	20	
	50	8.715 9787	4042	8.716 5666	4053	1.283 4334	9.999 4121	11	10	
59	0	8.716 3829	4038	8.716 9719	4049	1.283 0281	9.999 4110	11	0	1
	10	8.716 7867	4034	8.717 3768	4045	1.282 6232	9.999 4099	11	50	
	20	8.717 1901	4031	8.717 7813	4042	1.282 2187	9.999 4088	11	40	
	30	8.717 5932	4027	8.718 1855	4038	1.281 8145	9.999 4077	11	30	
	40	8.717 9959	4023	8.718 5893	4034	1.281 4107	9.999 4066	11	20	
	50	8.718 3982	4020	8.718 9927	4031	1.281 0073	9.999 4055	11	10	
60	0	8.718 8002		8.719 3958		1.280 6042	9.999 4044		0	0
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	8.718 8002	4015	8.719 3958	4026	1.280 6042	9.999 4044	11	0	60
	10	8.719 2017	4012	8.719 7984	4023	1.280 2016	9.999 4033	11	50	
	20	8.719 6029	4009	8.720 2007	4020	1.279 7993	9.999 4022	11	40	
	30	8.720 0038	4004	8.720 6027	4015	1.279 3973	9.999 4011	11	30	
	40	8.720 4042	4001	8.721 0042	4012	1.278 9958	9.999 4000	11	20	
	50	8.720 8043	3997	8.721 4054	4009	1.278 5946	9.999 3989	11	10	
1	0	8.721 2040	3994	8.721 8063	4004	1.278 1937	9.999 3978	11	0	59
	10	8.721 6034	3990	8.722 2067	4001	1.277 7933	9.999 3967	12	50	
	20	8.722 0024	3986	8.722 6068	3997	1.277 3932	9.999 3955	11	40	
	30	8.722 4010	3982	8.723 0065	3994	1.276 9935	9.999 3944	11	30	
	40	8.722 7992	3979	8.723 4059	3990	1.276 5941	9.999 3933	11	20	
	50	8.723 1971	3975	8.723 8049	3986	1.276 1951	9.999 3922	11	10	
2	0	8.723 5946	3972	8.724 2035	3983	1.275 7965	9.999 3911	11	0	58
	10	8.723 9918	3968	8.724 6018	3979	1.275 3982	9.999 3900	11	50	
	20	8.724 3886	3964	8.724 9997	3975	1.275 0003	9.999 3889	12	40	
	30	8.724 7850	3960	8.725 3972	3972	1.274 6028	9.999 3877	11	30	
	40	8.725 1810	3957	8.725 7944	3968	1.274 2056	9.999 3866	11	20	
	50	8.725 5767	3954	8.726 1912	3965	1.273 8088	9.999 3855	11	10	
3	0	8.725 9721	3950	8.726 5877	3961	1.273 4123	9.999 3844	11	0	57
	10	8.726 3671	3946	8.726 9838	3957	1.273 0162	9.999 3833	12	50	
	20	8.726 7617	3942	8.727 3795	3954	1.272 6205	9.999 3821	11	40	
	30	8.727 1559	3939	8.727 7749	3951	1.272 2251	9.999 3810	11	30	
	40	8.727 5498	3936	8.728 1700	3946	1.271 8300	9.999 3799	11	20	
	50	8.727 9434	3932	8.728 5646	3943	1.271 4354	9.999 3788	12	10	
4	0	8.728 3366	3928	8.728 9589	3940	1.271 0411	9.999 3776	11	0	56
	10	8.728 7294	3925	8.729 3529	3936	1.270 6471	9.999 3765	11	50	
	20	8.729 1219	3921	8.729 7465	3932	1.270 2535	9.999 3754	12	40	
	30	8.729 5140	3917	8.730 1397	3929	1.269 8603	9.999 3742	11	30	
	40	8.729 9057	3915	8.730 5326	3926	1.269 4674	9.999 3731	11	20	
	50	8.730 2972	3910	8.730 9252	3922	1.269 0748	9.999 3720	12	10	
5	0	8.730 6882	3907	8.731 3174	3918	1.268 6826	9.999 3708	11	0	55
	10	8.731 0789	3904	8.731 7092	3915	1.268 2908	9.999 3697	11	50	
	20	8.731 4693	3900	8.732 1007	3911	1.267 8993	9.999 3686	12	40	
	30	8.731 8593	3896	8.732 4918	3908	1.267 5082	9.999 3674	11	30	
	40	8.732 2489	3893	8.732 8826	3904	1.267 1174	9.999 3663	11	20	
	50	8.732 6382	3890	8.733 2730	3901	1.266 7270	9.999 3652	12	10	
6	0	8.733 0272	3885	8.733 6631	3898	1.266 3369	9.999 3640	11	0	54
	10	8.733 4157	3883	8.734 0529	3894	1.265 9471	9.999 3629	12	50	
	20	8.733 8040	3879	8.734 4423	3890	1.265 5577	9.999 3617	11	40	
	30	8.734 1919	3876	8.734 8313	3887	1.265 1687	9.999 3606	12	30	
	40	8.734 5795	3872	8.735 2200	3884	1.264 7800	9.999 3594	11	20	
	50	8.734 9667	3868	8.735 6084	3880	1.264 3916	9.999 3583	11	10	
7	0	8.735 3535	3865	8.735 9964	3876	1.264 0036	9.999 3572	12	0	53
	10	8.735 7400	3862	8.736 3840	3874	1.263 6160	9.999 3560	11	50	
	20	8.736 1262	3858	8.736 7714	3869	1.263 2286	9.999 3549	12	40	
	30	8.736 5120	3855	8.737 1583	3867	1.262 8417	9.999 3537	11	30	
	40	8.736 8975	3852	8.737 5450	3863	1.262 4550	9.999 3526	12	20	
	50	8.737 2827	3848	8.737 9313	3859	1.262 0687	9.999 3514	11	10	
8	0	8.737 6675	3844	8.738 3172	3856	1.261 6828	9.999 3503	12	0	52
	10	8.738 0519	3841	8.738 7028	3853	1.261 2972	9.999 3491	11	50	
	20	8.738 4360	3838	8.739 0881	3849	1.260 9119	9.999 3480	12	40	
	30	8.738 8198	3835	8.739 4730	3846	1.260 5270	9.999 3468	12	30	
	40	8.739 2033	3831	8.739 8576	3843	1.260 1424	9.999 3456	11	20	
	50	8.739 5864	3827	8.740 2419	3839	1.259 7581	9.999 3445	12	10	
9	0	8.739 9691	3824	8.740 6258	3836	1.259 3742	9.999 3433	11	0	51
	10	8.740 3515	3821	8.741 0094	3832	1.258 9906	9.999 3422	12	50	
	20	8.740 7336	3818	8.741 3926	3829	1.258 6074	9.999 3410	12	40	
	30	8.741 1154	3814	8.741 7755	3826	1.258 2245	9.999 3398	11	30	
	40	8.741 4968	3811	8.742 1581	3822	1.257 8419	9.999 3387	12	20	
	50	8.741 8779	3807	8.742 5403	3819	1.257 4597	9.999 3375	11	10	
10	0	8.742 2586		8.742 9222		1.257 0778	9.999 3364		0	50
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

86°

3°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	8.742 2586	3804	8.742 9222	3816	1.257 0778	9.999 3364	12	0	50
	10	8.742 6390	3801	8.743 3038	3812	1.256 6962	9.999 3352	12	50	
	20	8.743 0191	3797	8.743 6850	3810	1.256 3150	9.999 3340	11	40	
	30	8.743 3988	3794	8.744 0660	3805	1.255 9340	9.999 3329	12	30	
	40	8.743 7782	3791	8.744 4465	3803	1.255 5535	9.999 3317	12	20	
	50	8.744 1573	3787	8.744 8268	3799	1.255 1732	9.999 3305	12	10	
11	0	8.744 5360	3784	8.745 2067	3796	1.254 7933	9.999 3293	11	0	49
	10	8.744 9144	3781	8.745 5863	3792	1.254 4137	9.999 3282	12	50	
	20	8.745 2925	3778	8.745 9655	3789	1.254 0345	9.999 3270	12	40	
	30	8.745 6703	3774	8.746 3444	3786	1.253 6556	9.999 3258	11	30	
	40	8.746 0477	3771	8.746 7230	3783	1.253 2770	9.999 3247	12	20	
	50	8.746 4248	3767	8.747 1013	3779	1.252 8987	9.999 3235	12	10	
12	0	8.746 8015	3765	8.747 4792	3777	1.252 5208	9.999 3223	12	0	48
	10	8.747 1780	3761	8.747 8569	3772	1.252 1431	9.999 3211	12	50	
	20	8.747 5541	3758	8.748 2341	3770	1.251 7659	9.999 3199	11	40	
	30	8.747 9299	3754	8.748 6111	3766	1.251 3889	9.999 3188	12	30	
	40	8.748 3053	3752	8.748 9877	3764	1.251 0123	9.999 3176	12	20	
	50	8.748 6805	3748	8.749 3641	3759	1.250 6359	9.999 3164	12	10	
13	0	8.749 0553	3744	8.749 7400	3757	1.250 2600	9.999 3152	12	0	47
	10	8.749 4297	3742	8.750 1157	3754	1.249 8843	9.999 3140	11	50	
	20	8.749 8039	3738	8.750 4911	3750	1.249 5089	9.999 3129	12	40	
	30	8.750 1777	3736	8.750 8661	3747	1.249 1339	9.999 3117	12	30	
	40	8.750 5513	3731	8.751 2408	3744	1.248 7592	9.999 3105	12	20	
	50	8.750 9244	3729	8.751 6152	3740	1.248 3848	9.999 3093	12	10	
14	0	8.751 2973	3726	8.751 9892	3737	1.248 0108	9.999 3081	12	0	46
	10	8.751 6699	3722	8.752 3629	3735	1.247 6371	9.999 3069	12	50	
	20	8.752 0421	3719	8.752 7364	3731	1.247 2636	9.999 3057	12	40	
	30	8.752 4140	3716	8.753 1095	3728	1.246 8905	9.999 3045	12	30	
	40	8.752 7856	3713	8.753 4823	3724	1.246 5177	9.999 3033	12	20	
	50	8.753 1569	3709	8.753 8547	3722	1.246 1453	9.999 3021	12	10	
15	0	8.753 5278	3706	8.754 2269	3718	1.245 7731	9.999 3009	11	0	45
	10	8.753 8984	3704	8.754 5987	3715	1.245 4013	9.999 2998	12	50	
	20	8.754 2688	3700	8.754 9702	3712	1.245 0298	9.999 2986	12	40	
	30	8.754 6388	3697	8.755 3414	3709	1.244 6586	9.999 2974	12	30	
	40	8.755 0085	3693	8.755 7123	3706	1.244 2877	9.999 2962	12	20	
	50	8.755 3778	3691	8.756 0829	3702	1.243 9171	9.999 2950	12	10	
16	0	8.755 7469	3687	8.756 4531	3700	1.243 5469	9.999 2938	12	0	44
	10	8.756 1156	3684	8.756 8231	3696	1.243 1769	9.999 2926	12	50	
	20	8.756 4840	3682	8.757 1927	3693	1.242 8073	9.999 2914	13	40	
	30	8.756 8522	3678	8.757 5620	3690	1.242 4380	9.999 2901	12	30	
	40	8.757 2200	3674	8.757 9310	3687	1.242 0690	9.999 2889	12	20	
	50	8.757 5874	3672	8.758 2997	3684	1.241 7003	9.999 2877	12	10	
17	0	8.757 9546	3669	8.758 6681	3681	1.241 3319	9.999 2865	12	0	43
	10	8.758 3215	3665	8.759 0362	3677	1.240 9638	9.999 2853	12	50	
	20	8.758 6880	3663	8.759 4039	3675	1.240 5961	9.999 2841	12	40	
	30	8.759 0543	3659	8.759 7714	3671	1.240 2286	9.999 2829	12	30	
	40	8.759 4202	3657	8.760 1385	3669	1.239 8615	9.999 2817	12	20	
	50	8.759 7859	3653	8.760 5054	3665	1.239 4946	9.999 2805	12	10	
18	0	8.760 1512	3650	8.760 8719	3662	1.239 1281	9.999 2793	13	0	42
	10	8.760 5162	3647	8.761 2381	3659	1.238 7619	9.999 2780	12	50	
	20	8.760 8809	3644	8.761 6040	3657	1.238 3960	9.999 2768	12	40	
	30	8.761 2453	3641	8.761 9697	3653	1.238 0303	9.999 2756	12	30	
	40	8.761 6094	3637	8.762 3350	3650	1.237 6650	9.999 2744	12	20	
	50	8.761 9731	3635	8.762 7000	3647	1.237 3000	9.999 2732	12	10	
19	0	8.762 3366	3632	8.763 0647	3644	1.236 9353	9.999 2720	13	0	41
	10	8.762 6998	3629	8.763 4291	3640	1.236 5709	9.999 2707	12	50	
	20	8.763 0627	3625	8.763 7931	3638	1.236 2069	9.999 2695	12	40	
	30	8.763 4252	3623	8.764 1569	3635	1.235 8431	9.999 2683	12	30	
	40	8.763 7875	3619	8.764 5204	3632	1.235 4796	9.999 2671	13	20	
	50	8.764 1494	3617	8.764 8836	3629	1.235 1164	9.999 2658	12	10	
20	0	8.764 5111		8.765 2465		1.234 7535	9.999 2646		0	40
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

86°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	8.764 5111	3613	8.765 2465	3626	1.234 7535	9.999 2646	12	0	40
	10	8.764 8724	3611	8.765 6091	3622	1.234 3909	9.999 2634	12	50	
	20	8.765 2335	3608	8.765 9713	3620	1.234 0287	9.999 2622	13	40	
	30	8.765 5943	3604	8.766 3333	3617	1.233 6667	9.999 2609	12	30	
	40	8.765 9547	3602	8.766 6950	3614	1.233 3050	9.999 2597	12	20	
	50	8.766 3149	3598	8.767 0564	3611	1.232 9436	9.999 2585	13	10	
21	0	8.766 6747	3596	8.767 4175	3607	1.232 5825	9.999 2572	12	0	39
	10	8.767 0343	3592	8.767 7782	3605	1.232 2218	9.999 2560	12	50	
	20	8.767 3935	3590	8.768 1387	3602	1.231 8613	9.999 2548	13	40	
	30	8.767 7525	3586	8.768 4989	3599	1.231 5011	9.999 2535	12	30	
	40	8.768 1111	3584	8.768 8588	3596	1.231 1412	9.999 2523	12	20	
	50	8.768 4695	3580	8.769 2184	3593	1.230 7816	9.999 2511	13	10	
22	0	8.768 8275	3578	8.769 5777	3590	1.230 4223	9.999 2498	12	0	38
	10	8.769 1853	3575	8.769 9367	3587	1.230 0633	9.999 2486	12	50	
	20	8.769 5428	3572	8.770 2954	3585	1.229 7046	9.999 2474	13	40	
	30	8.769 9000	3568	8.770 6539	3581	1.229 3461	9.999 2461	12	30	
	40	8.770 2568	3566	8.771 0120	3578	1.228 9880	9.999 2449	13	20	
	50	8.770 6134	3563	8.771 3698	3576	1.228 6302	9.999 2436	12	10	
23	0	8.770 9697	3560	8.771 7274	3572	1.228 2726	9.999 2424	13	0	37
	10	8.771 3257	3557	8.772 0846	3570	1.227 9154	9.999 2411	12	50	
	20	8.771 6814	3555	8.772 4416	3566	1.227 5584	9.999 2399	13	40	
	30	8.772 0369	3551	8.772 7982	3564	1.227 2018	9.999 2386	12	30	
	40	8.772 3920	3548	8.773 1546	3561	1.226 8454	9.999 2374	13	20	
	50	8.772 7468	3546	8.773 5107	3558	1.226 4893	9.999 2361	12	10	
24	0	8.773 1014	3542	8.773 8665	3555	1.226 1335	9.999 2349	13	0	36
	10	8.773 4556	3540	8.774 2220	3552	1.225 7780	9.999 2336	12	50	
	20	8.773 8096	3537	8.774 5772	3549	1.225 4228	9.999 2324	13	40	
	30	8.774 1633	3533	8.774 9321	3547	1.225 0679	9.999 2311	12	30	
	40	8.774 5166	3531	8.775 2868	3543	1.224 7132	9.999 2299	13	20	
	50	8.774 8697	3529	8.775 6411	3541	1.224 3589	9.999 2286	12	10	
25	0	8.775 2226	3525	8.775 9952	3538	1.224 0048	9.999 2274	13	0	35
	10	8.775 5751	3522	8.776 3490	3535	1.223 6510	9.999 2261	12	50	
	20	8.775 9273	3520	8.776 7025	3532	1.223 2975	9.999 2249	13	40	
	30	8.776 2793	3516	8.777 0557	3529	1.222 9443	9.999 2236	13	30	
	40	8.776 6309	3514	8.777 4086	3526	1.222 5914	9.999 2223	12	20	
	50	8.776 9823	3511	8.777 7612	3524	1.222 2388	9.999 2211	13	10	
26	0	8.777 3334	3508	8.778 1136	3521	1.221 8864	9.999 2198	13	0	34
	10	8.777 6842	3505	8.778 4657	3518	1.221 5343	9.999 2185	12	50	
	20	8.778 0347	3503	8.778 8175	3515	1.221 1825	9.999 2173	13	40	
	30	8.778 3850	3499	8.779 1690	3512	1.220 8310	9.999 2160	13	30	
	40	8.778 7349	3497	8.779 5202	3509	1.220 4798	9.999 2147	12	20	
	50	8.779 0846	3494	8.779 8711	3507	1.220 1289	9.999 2135	13	10	
27	0	8.779 4340	3491	8.780 2218	3504	1.219 7782	9.999 2122	13	0	33
	10	8.779 7831	3488	8.780 5722	3501	1.219 4278	9.999 2109	12	50	
	20	8.780 1319	3486	8.780 9223	3498	1.219 0777	9.999 2097	13	40	
	30	8.780 4805	3482	8.781 2721	3495	1.218 7279	9.999 2084	13	30	
	40	8.780 8287	3480	8.781 6216	3493	1.218 3784	9.999 2071	12	20	
	50	8.781 1767	3477	8.781 9709	3490	1.218 0291	9.999 2059	13	10	
28	0	8.781 5244	3475	8.782 3199	3487	1.217 6801	9.999 2046	13	0	32
	10	8.781 8719	3471	8.782 6686	3484	1.217 3314	9.999 2033	13	50	
	20	8.782 2190	3469	8.783 0170	3481	1.216 9830	9.999 2020	13	40	
	30	8.782 5659	3466	8.783 3651	3479	1.216 6349	9.999 2007	12	30	
	40	8.782 9125	3463	8.783 7130	3476	1.216 2870	9.999 1995	13	20	
	50	8.783 2588	3460	8.784 0606	3473	1.215 9394	9.999 1982	13	10	
29	0	8.783 6048	3458	8.784 4079	3471	1.215 5921	9.999 1969	13	0	31
	10	8.783 9506	3455	8.784 7550	3467	1.215 2450	9.999 1956	13	50	
	20	8.784 2961	3452	8.785 1017	3465	1.214 8983	9.999 1943	12	40	
	30	8.784 6413	3449	8.785 4482	3463	1.214 5518	9.999 1931	13	30	
	40	8.784 9862	3447	8.785 7945	3459	1.214 2055	9.999 1918	13	20	
	50	8.785 3309	3444	8.786 1404	3457	1.213 8596	9.999 1905	13	10	
30	0	8.785 6753		8.786 4861		1.213 5139	9.999 1892		0	30
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	8.785 6753	3441	8.786 4861	3454	1.213 5139	9.999 1892	13	0	30
	10	8.786 0194	3438	8.786 8315	3451	1.213 1685	9.999 1879	13	50	
	20	8.786 3632	3436	8.787 1766	3449	1.212 8234	9.999 1866	13	40	
	30	8.786 7068	3433	8.787 5215	3446	1.212 4785	9.999 1853	13	30	
	40	8.787 0501	3430	8.787 8661	3443	1.212 1339	9.999 1840	13	20	
	50	8.787 3931	3428	8.788 2104	3440	1.211 7896	9.999 1827	12	10	
31	0	8.787 7359	3424	8.788 5544	3438	1.211 4456	9.999 1815	13	0	29
	10	8.788 0783	3422	8.788 8982	3435	1.211 1018	9.999 1802	13	50	
	20	8.788 4205	3420	8.789 2417	3432	1.210 7583	9.999 1789	13	40	
	30	8.788 7625	3416	8.789 5849	3430	1.210 4151	9.999 1776	13	30	
	40	8.789 1041	3414	8.789 9279	3427	1.210 0721	9.999 1763	13	20	
	50	8.789 4455	3412	8.790 2706	3424	1.209 7294	9.999 1750	13	10	
32	0	8.789 7867	3408	8.790 6130	3422	1.209 3870	9.999 1737	13	0	28
	10	8.790 1275	3406	8.790 9552	3419	1.209 0448	9.999 1724	13	50	
	20	8.790 4681	3403	8.791 2971	3416	1.208 7029	9.999 1711	13	40	
	30	8.790 8084	3401	8.791 6387	3413	1.208 3613	9.999 1698	13	30	
	40	8.791 1485	3398	8.791 9800	3411	1.208 0200	9.999 1685	13	20	
	50	8.791 4883	3395	8.792 3211	3409	1.207 6789	9.999 1672	13	10	
33	0	8.791 8278	3393	8.792 6620	3405	1.207 3380	9.999 1659	14	0	27
	10	8.792 1671	3390	8.793 0025	3403	1.206 9975	9.999 1645	13	50	
	20	8.792 5061	3387	8.793 3428	3401	1.206 6572	9.999 1632	13	40	
	30	8.792 8448	3384	8.793 6829	3397	1.206 3171	9.999 1619	13	30	
	40	8.793 1832	3382	8.794 0226	3395	1.205 9774	9.999 1606	13	20	
	50	8.793 5214	3380	8.794 3621	3393	1.205 6379	9.999 1593	13	10	
34	0	8.793 8594	3376	8.794 7014	3390	1.205 2986	9.999 1580	13	0	26
	10	8.794 1970	3374	8.795 0404	3387	1.204 9596	9.999 1567	13	50	
	20	8.794 5344	3372	8.795 3791	3384	1.204 6209	9.999 1554	13	40	
	30	8.794 8716	3369	8.795 7175	3382	1.204 2825	9.999 1541	14	30	
	40	8.795 2085	3366	8.796 0557	3380	1.203 9443	9.999 1527	13	20	
	50	8.795 5451	3363	8.796 3937	3376	1.203 6063	9.999 1514	13	10	
35	0	8.795 8814	3361	8.796 7313	3374	1.203 2687	9.999 1501	13	0	25
	10	8.796 2175	3359	8.797 0687	3372	1.202 9313	9.999 1488	13	50	
	20	8.796 5534	3355	8.797 4059	3369	1.202 5941	9.999 1475	14	40	
	30	8.796 8889	3353	8.797 7428	3366	1.202 2572	9.999 1461	13	30	
	40	8.797 2242	3351	8.798 0794	3364	1.201 9206	9.999 1448	13	20	
	50	8.797 5593	3348	8.798 4158	3361	1.201 5842	9.999 1435	13	10	
36	0	8.797 8941	3345	8.798 7519	3359	1.201 2481	9.999 1422	14	0	24
	10	8.798 2286	3343	8.799 0878	3356	1.200 9122	9.999 1408	13	50	
	20	8.798 5629	3340	8.799 4234	3353	1.200 5766	9.999 1395	13	40	
	30	8.798 8969	3338	8.799 7587	3351	1.200 2413	9.999 1382	13	30	
	40	8.799 2307	3335	8.800 0938	3348	1.199 9062	9.999 1369	14	20	
	50	8.799 5642	3332	8.800 4286	3346	1.199 5714	9.999 1355	13	10	
37	0	8.799 8974	3330	8.800 7632	3343	1.199 2368	9.999 1342	13	0	23
	10	8.800 2304	3327	8.801 0975	3341	1.198 9025	9.999 1329	14	50	
	20	8.800 5631	3325	8.801 4316	3338	1.198 5684	9.999 1315	13	40	
	30	8.800 8956	3322	8.801 7654	3335	1.198 2346	9.999 1302	13	30	
	40	8.801 2278	3320	8.802 0989	3334	1.197 9011	9.999 1289	14	20	
	50	8.801 5598	3317	8.802 4323	3330	1.197 5677	9.999 1275	13	10	
38	0	8.801 8915	3315	8.802 7653	3328	1.197 2347	9.999 1262	13	0	22
	10	8.802 2230	3312	8.803 0981	3325	1.196 9019	9.999 1249	14	50	
	20	8.802 5542	3309	8.803 4306	3323	1.196 5694	9.999 1235	13	40	
	30	8.802 8851	3307	8.803 7629	3321	1.196 2371	9.999 1222	14	30	
	40	8.803 2158	3305	8.804 0950	3317	1.195 9050	9.999 1208	13	20	
	50	8.803 5463	3301	8.804 4267	3316	1.195 5733	9.999 1195	13	10	
39	0	8.803 8764	3300	8.804 7583	3313	1.195 2417	9.999 1182	14	0	21
	10	8.804 2064	3297	8.805 0896	3310	1.194 9104	9.999 1168	13	50	
	20	8.804 5361	3294	8.805 4206	3308	1.194 5794	9.999 1155	14	40	
	30	8.804 8655	3292	8.805 7514	3305	1.194 2486	9.999 1141	13	30	
	40	8.805 1947	3289	8.806 0819	3303	1.193 9181	9.999 1128	14	20	
	50	8.805 5236	3287	8.806 4122	3300	1.193 5878	9.999 1114	13	10	
40	0	8.805 8523		8.806 7422		1.193 2578	9.999 1101		0	20
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

86°

3°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	8.805 8523	3285	8.806 7422	3298	1.193 2578	9.999 1101	14	0	20
	10	8.806 1808	3281	8.807 0720	3296	1.192 9280	9.999 1087	13	50	
	20	8.806 5089	3280	8.807 4016	3293	1.192 5984	9.999 1074	14	40	
	30	8.806 8369	3277	8.807 7309	3290	1.192 2691	9.999 1060	13	30	
	40	8.807 1646	3274	8.808 0599	3288	1.191 9401	9.999 1047	14	20	
	50	8.807 4920	3272	8.808 3887	3285	1.191 6113	9.999 1033	13	10	
41	0	8.807 8192	3270	8.808 7172	3283	1.191 2828	9.999 1020	14	0	19
	10	8.808 1462	3267	8.809 0455	3281	1.190 9545	9.999 1006	13	50	
	20	8.808 4729	3264	8.809 3736	3278	1.190 6264	9.999 0993	14	40	
	30	8.808 7993	3262	8.809 7014	3276	1.190 2986	9.999 0979	14	30	
	40	8.809 1255	3260	8.810 0290	3273	1.189 9710	9.999 0965	13	20	
	50	8.809 4515	3257	8.810 3563	3271	1.189 6437	9.999 0952	14	10	
42	0	8.809 7772	3255	8.810 6834	3268	1.189 3166	9.999 0938	13	0	18
	10	8.810 1027	3252	8.811 0102	3266	1.188 9898	9.999 0925	14	50	
	20	8.810 4279	3250	8.811 3368	3263	1.188 6632	9.999 0911	14	40	
	30	8.810 7529	3247	8.811 6631	3262	1.188 3369	9.999 0897	13	30	
	40	8.811 0776	3245	8.811 9893	3258	1.188 0107	9.999 0884	14	20	
	50	8.811 4021	3243	8.812 3151	3256	1.187 6849	9.999 0870	14	10	
43	0	8.811 7264	3240	8.812 6407	3254	1.187 3593	9.999 0856	13	0	17
	10	8.812 0504	3237	8.812 9661	3251	1.187 0339	9.999 0843	14	50	
	20	8.812 3741	3236	8.813 2912	3249	1.186 7088	9.999 0829	14	40	
	30	8.812 6977	3232	8.813 6161	3247	1.186 3839	9.999 0815	13	30	
	40	8.813 0209	3231	8.813 9408	3244	1.186 0592	9.999 0802	14	20	
	50	8.813 3440	3228	8.814 2652	3242	1.185 7348	9.999 0788	14	10	
44	0	8.813 6668	3225	8.814 5894	3239	1.185 4106	9.999 0774	14	0	16
	10	8.813 9893	3224	8.814 9133	3237	1.185 0867	9.999 0760	13	50	
	20	8.814 3117	3220	8.815 2370	3235	1.184 7630	9.999 0747	14	40	
	30	8.814 6337	3219	8.815 5605	3232	1.184 4395	9.999 0733	14	30	
	40	8.814 9556	3216	8.815 8837	3229	1.184 1163	9.999 0719	14	20	
	50	8.815 2772	3213	8.816 2066	3228	1.183 7934	9.999 0705	14	10	
45	0	8.815 5985	3211	8.816 5294	3225	1.183 4706	9.999 0691	13	0	15
	10	8.815 9196	3209	8.816 8519	3222	1.183 1481	9.999 0678	14	50	
	20	8.816 2405	3207	8.817 1741	3221	1.182 8259	9.999 0664	14	40	
	30	8.816 5612	3204	8.817 4962	3218	1.182 5038	9.999 0650	14	30	
	40	8.816 8816	3202	8.817 8180	3215	1.182 1820	9.999 0636	14	20	
	50	8.817 2018	3199	8.818 1395	3213	1.181 8605	9.999 0622	14	10	
46	0	8.817 5217	3197	8.818 4608	3211	1.181 5392	9.999 0608	13	0	14
	10	8.817 8414	3194	8.818 7819	3209	1.181 2181	9.999 0595	14	50	
	20	8.818 1608	3193	8.819 1028	3206	1.180 8972	9.999 0581	14	40	
	30	8.818 4801	3190	8.819 4234	3204	1.180 5766	9.999 0567	14	30	
	40	8.818 7991	3187	8.819 7438	3201	1.180 2562	9.999 0553	14	20	
	50	8.819 1178	3185	8.820 0639	3199	1.179 9361	9.999 0539	14	10	
47	0	8.819 4363	3183	8.820 3838	3197	1.179 6162	9.999 0525	14	0	13
	10	8.819 7546	3181	8.820 7035	3194	1.179 2965	9.999 0511	14	50	
	20	8.820 0727	3178	8.821 0229	3193	1.178 9771	9.999 0497	14	40	
	30	8.820 3905	3176	8.821 3422	3189	1.178 6578	9.999 0483	14	30	
	40	8.820 7081	3173	8.821 6611	3188	1.178 3389	9.999 0469	14	20	
	50	8.821 0254	3171	8.821 9799	3185	1.178 0201	9.999 0455	14	10	
48	0	8.821 3425	3169	8.822 2984	3183	1.177 7016	9.999 0441	14	0	12
	10	8.821 6594	3167	8.822 6167	3180	1.177 3833	9.999 0427	14	50	
	20	8.821 9761	3164	8.822 9347	3179	1.177 0653	9.999 0413	14	40	
	30	8.822 2925	3162	8.823 2526	3175	1.176 7474	9.999 0399	14	30	
	40	8.822 6087	3159	8.823 5701	3174	1.176 4299	9.999 0385	14	20	
	50	8.822 9246	3158	8.823 8875	3171	1.176 1125	9.999 0371	14	10	
49	0	8.823 2404	3155	8.824 2046	3169	1.175 7954	9.999 0357	14	0	11
	10	8.823 5559	3152	8.824 5215	3167	1.175 4785	9.999 0343	14	50	
	20	8.823 8711	3151	8.824 8382	3165	1.175 1618	9.999 0329	14	40	
	30	8.824 1862	3148	8.825 1547	3162	1.174 8453	9.999 0315	14	30	
	40	8.824 5010	3146	8.825 4709	3160	1.174 5291	9.999 0301	14	20	
	50	8.824 8156	3143	8.825 7869	3157	1.174 2131	9.999 0287	14	10	
50	0	8.825 1299		8.826 1026		1.173 8974	9.999 0273		0	10
'	"	Cos	d.	Cotg	d.	Tang	Sin	d.	"	'

86°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	8.825 1299	3141	8.826 1026	3156	1.173 8974	9.999 0273	14	0	10
	10	8.825 4440	3139	8.826 4182	3153	1.173 5818	9.999 0259	14	50	
	20	8.825 7579	3137	8.826 7335	3150	1.173 2665	9.999 0245	15	40	
	30	8.826 0716	3134	8.827 0485	3149	1.172 9515	9.999 0230	14	30	
	40	8.826 3850	3132	8.827 3634	3146	1.172 6366	9.999 0216	14	20	
	50	8.826 6982	3130	8.827 6780	3144	1.172 3220	9.999 0202	14	10	
51	0	8.827 0112	3128	8.827 9924	3142	1.172 0076	9.999 0188	14	0	9
	10	8.827 3240	3125	8.828 3066	3140	1.171 6934	9.999 0174	14	50	
	20	8.827 6365	3123	8.828 6206	3137	1.171 3794	9.999 0160	15	40	
	30	8.827 9488	3121	8.828 9343	3135	1.171 0657	9.999 0145	14	30	
	40	8.828 2609	3119	8.829 2478	3133	1.170 7522	9.999 0131	14	20	
	50	8.828 5728	3116	8.829 5611	3130	1.170 4389	9.999 0117	14	10	
52	0	8.828 8844	3114	8.829 8741	3128	1.170 1259	9.999 0103	14	0	8
	10	8.829 1958	3112	8.830 1869	3127	1.169 8131	9.999 0089	15	50	
	20	8.829 5070	3109	8.830 4996	3123	1.169 5004	9.999 0074	14	40	
	30	8.829 8179	3108	8.830 8119	3122	1.169 1881	9.999 0060	14	30	
	40	8.830 1287	3105	8.831 1241	3119	1.168 8759	9.999 0046	14	20	
	50	8.830 4392	3103	8.831 4360	3118	1.168 5640	9.999 0032	15	10	
53	0	8.830 7495	3101	8.831 7478	3115	1.168 2522	9.999 0017	14	0	7
	10	8.831 0596	3098	8.832 0593	3112	1.167 9407	9.999 0003	14	50	
	20	8.831 3694	3096	8.832 3705	3111	1.167 6295	9.998 9989	15	40	
	30	8.831 6790	3094	8.832 6816	3108	1.167 3184	9.998 9974	14	30	
	40	8.831 9884	3092	8.832 9924	3106	1.167 0076	9.998 9960	14	20	
	50	8.832 2976	3090	8.833 3030	3104	1.166 6970	9.998 9946	15	10	
54	0	8.832 6066	3087	8.833 6134	3102	1.166 3866	9.998 9931	14	0	6
	10	8.832 9153	3085	8.833 9236	3100	1.166 0764	9.998 9917	14	50	
	20	8.833 2238	3083	8.834 2336	3097	1.165 7664	9.998 9903	15	40	
	30	8.833 5321	3081	8.834 5433	3095	1.165 4567	9.998 9888	14	30	
	40	8.833 8402	3079	8.834 8528	3093	1.165 1472	9.998 9874	15	20	
	50	8.834 1481	3076	8.835 1621	3091	1.164 8379	9.998 9859	14	10	
55	0	8.834 4557	3074	8.835 4712	3089	1.164 5288	9.998 9845	14	0	5
	10	8.834 7631	3072	8.835 7801	3086	1.164 2199	9.998 9831	15	50	
	20	8.835 0703	3070	8.836 0887	3084	1.163 9113	9.998 9816	14	40	
	30	8.835 3773	3068	8.836 3971	3082	1.163 6029	9.998 9802	15	30	
	40	8.835 6841	3065	8.836 7053	3080	1.163 2947	9.998 9787	14	20	
	50	8.835 9906	3063	8.837 0133	3078	1.162 9867	9.998 9773	15	10	
56	0	8.836 2969	3062	8.837 3211	3076	1.162 6789	9.998 9758	14	0	4
	10	8.836 6031	3059	8.837 6287	3073	1.162 3713	9.998 9744	15	50	
	20	8.836 9090	3056	8.837 9360	3072	1.162 0640	9.998 9729	14	40	
	30	8.837 2146	3055	8.838 2432	3069	1.161 7568	9.998 9715	15	30	
	40	8.837 5201	3053	8.838 5501	3067	1.161 4499	9.998 9700	14	20	
	50	8.837 8254	3050	8.838 8568	3065	1.161 1432	9.998 9686	15	10	
57	0	8.838 1304	3048	8.839 1633	3062	1.160 8367	9.998 9671	14	0	3
	10	8.838 4352	3046	8.839 4695	3061	1.160 5305	9.998 9657	15	50	
	20	8.838 7398	3044	8.839 7756	3058	1.160 2244	9.998 9642	14	40	
	30	8.839 0442	3042	8.840 0814	3057	1.159 9186	9.998 9628	15	30	
	40	8.839 3484	3039	8.840 3871	3054	1.159 6129	9.998 9613	15	20	
	50	8.839 6523	3038	8.840 6925	3052	1.159 3075	9.998 9598	14	10	
58	0	8.839 9561	3035	8.840 9977	3050	1.159 0023	9.998 9584	15	0	2
	10	8.840 2596	3033	8.841 3027	3048	1.158 6973	9.998 9569	14	50	
	20	8.840 5629	3032	8.841 6075	3046	1.158 3925	9.998 9555	15	40	
	30	8.840 8661	3029	8.841 9121	3043	1.158 0879	9.998 9540	15	30	
	40	8.841 1690	3026	8.842 2164	3042	1.157 7836	9.998 9525	14	20	
	50	8.841 4716	3025	8.842 5206	3039	1.157 4794	9.998 9511	15	10	
59	0	8.841 7741	3023	8.842 8245	3037	1.157 1755	9.998 9496	15	0	1
	10	8.842 0764	3020	8.843 1282	3036	1.156 8718	9.998 9481	14	50	
	20	8.842 3784	3019	8.843 4318	3033	1.156 5682	9.998 9467	15	40	
	30	8.842 6803	3016	8.843 7351	3031	1.156 2649	9.998 9452	15	30	
	40	8.842 9819	3014	8.844 0382	3028	1.155 9618	9.998 9437	14	20	
	50	8.843 2833	3012	8.844 3410	3027	1.155 6590	9.998 9423	15	10	
60	0	8.843 5845		8.844 6437		1.155 3563	9.998 9408		0	0
'	"	Cos	d.	Cotg	d.	Tang	Sin	d	"	'

4°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	8.843 5845	3010	8.844 6437	3025	1.155 3563	9.998 9408	15	0	60
	10	8.843 8855	3008	8.844 9462	3023	1.155 0538	9.998 9393	15	50	
	20	8.844 1863	3006	8.845 2485	3020	1.154 7515	9.998 9378	14	40	
	30	8.844 4869	3004	8.845 5505	3019	1.154 4495	9.998 9364	15	30	
	40	8.844 7873	3001	8.845 8524	3016	1.154 1476	9.998 9349	15	20	
	50	8.845 0874	3000	8.846 1540	3014	1.153 8460	9.998 9334	15	10	
1	0	8.845 3874	2997	8.846 4554	3013	1.153 5446	9.998 9319	14	0	59
	10	8.845 6871	2996	8.846 7567	3010	1.153 2433	9.998 9305	15	50	
	20	8.845 9867	2993	8.847 0577	3008	1.152 9423	9.998 9290	15	40	
	30	8.846 2860	2991	8.847 3585	3006	1.152 6415	9.998 9275	15	30	
	40	8.846 5851	2989	8.847 6591	3004	1.152 3409	9.998 9260	15	20	
	50	8.846 8840	2987	8.847 9595	3002	1.152 0405	9.998 9245	15	10	
2	0	8.847 1827	2985	8.848 2597	3000	1.151 7403	9.998 9230	14	0	58
	10	8.847 4812	2983	8.848 5597	2998	1.151 4403	9.998 9216	15	50	
	20	8.847 7795	2981	8.848 8595	2995	1.151 1405	9.998 9201	15	40	
	30	8.848 0776	2979	8.849 1590	2994	1.150 8410	9.998 9186	15	30	
	40	8.848 3755	2977	8.849 4584	2992	1.150 5416	9.998 9171	15	20	
	50	8.848 6732	2975	8.849 7576	2990	1.150 2424	9.998 9156	15	10	
3	0	8.848 9707	2972	8.850 0566	2987	1.149 9434	9.998 9141	15	0	57
	10	8.849 2679	2971	8.850 3553	2986	1.149 6447	9.998 9126	15	50	
	20	8.849 5650	2969	8.850 6539	2983	1.149 3461	9.998 9111	15	40	
	30	8.849 8619	2966	8.850 9522	2982	1.149 0478	9.998 9096	14	30	
	40	8.850 1585	2965	8.851 2504	2979	1.148 7496	9.998 9082	15	20	
	50	8.850 4550	2962	8.851 5483	2978	1.148 4517	9.998 9067	15	10	
4	0	8.850 7512	2961	8.851 8461	2975	1.148 1539	9.998 9052	15	0	56
	10	8.851 0473	2958	8.852 1436	2974	1.147 8564	9.998 9037	15	50	
	20	8.851 3431	2957	8.852 4410	2971	1.147 5590	9.998 9022	15	40	
	30	8.851 6388	2954	8.852 7381	2970	1.147 2619	9.998 9007	15	30	
	40	8.851 9342	2953	8.853 0351	2967	1.146 9649	9.998 8992	15	20	
	50	8.852 2295	2950	8.853 3318	2965	1.146 6682	9.998 8977	15	10	
5	0	8.852 5245	2948	8.853 6283	2964	1.146 3717	9.998 8962	15	0	55
	10	8.852 8193	2947	8.853 9247	2961	1.146 0753	9.998 8947	15	50	
	20	8.853 1140	2944	8.854 2208	2960	1.145 7792	9.998 8932	16	40	
	30	8.853 4084	2942	8.854 5168	2957	1.145 4832	9.998 8916	15	30	
	40	8.853 7026	2941	8.854 8125	2956	1.145 1875	9.998 8901	15	20	
	50	8.853 9967	2938	8.855 1081	2953	1.144 8919	9.998 8886	15	10	
6	0	8.854 2905	2937	8.855 4034	2951	1.144 5966	9.998 8871	15	0	54
	10	8.854 5842	2934	8.855 6985	2950	1.144 3015	9.998 8856	15	50	
	20	8.854 8776	2932	8.855 9935	2947	1.144 0065	9.998 8841	15	40	
	30	8.855 1708	2931	8.856 2882	2946	1.143 7118	9.998 8826	15	30	
	40	8.855 4639	2928	8.856 5828	2943	1.143 4172	9.998 8811	15	20	
	50	8.855 7567	2926	8.856 8771	2942	1.143 1229	9.998 8796	16	10	
7	0	8.856 0493	2925	8.857 1713	2940	1.142 8287	9.998 8780	15	0	53
	10	8.856 3418	2922	8.857 4653	2937	1.142 5347	9.998 8765	15	50	
	20	8.856 6340	2921	8.857 7590	2936	1.142 2410	9.998 8750	15	40	
	30	8.856 9261	2918	8.858 0526	2934	1.141 9474	9.998 8735	15	30	
	40	8.857 2179	2917	8.858 3460	2931	1.141 6540	9.998 8720	15	20	
	50	8.857 5096	2914	8.858 6391	2930	1.141 3609	9.998 8705	16	10	
8	0	8.857 8010	2913	8.858 9321	2928	1.141 0679	9.998 8689	15	0	52
	10	8.858 0923	2911	8.859 2249	2926	1.140 7751	9.998 8674	15	50	
	20	8.858 3834	2908	8.859 5175	2924	1.140 4825	9.998 8659	15	40	
	30	8.858 6742	2907	8.859 8099	2922	1.140 1901	9.998 8644	16	30	
	40	8.858 9649	2905	8.860 1021	2920	1.139 8979	9.998 8628	15	20	
	50	8.859 2554	2903	8.860 3941	2918	1.139 6059	9.998 8613	15	10	
9	0	8.859 5457	2900	8.860 6859	2916	1.139 3141	9.998 8598	15	0	51
	10	8.859 8357	2899	8.860 9775	2914	1.139 0225	9.998 8583	16	50	
	20	8.860 1256	2897	8.861 2689	2912	1.138 7311	9.998 8567	15	40	
	30	8.860 4153	2895	8.861 5601	2911	1.138 4399	9.998 8552	15	30	
	40	8.860 7048	2893	8.861 8512	2908	1.138 1488	9.998 8537	16	20	
	50	8.860 9941	2892	8.862 1420	2907	1.137 8580	9.998 8521	15	10	
10	0	8.861 2833		8.862 4327		1.137 5673	9.998 8506		0	50
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

85°

4°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	8.861 2833	2889	8.862 4327	2904	1.137 5673	9.998 8506	15	0	50
	10	8.861 5722	2887	8.862 7231	2903	1.137 2769	9.998 8491	16	50	
	20	8.861 8609	2886	8.863 0134	2901	1.136 9866	9.998 8475	15	40	
	30	8.862 1495	2883	8.863 3035	2898	1.136 6965	9.998 8460	15	30	
	40	8.862 4378	2881	8.863 5933	2897	1.136 4067	9.998 8445	16	20	
	50	8.862 7259	2880	8.863 8830	2895	1.136 1170	9.998 8429	15	10	
11	0	8.863 0139	2878	8.864 1725	2893	1.135 8275	9.998 8414	16	0	49
	10	8.863 3017	2876	8.864 4618	2892	1.135 5382	9.998 8398	15	50	
	20	8.863 5893	2873	8.864 7510	2889	1.135 2490	9.998 8383	15	40	
	30	8.863 8766	2872	8.865 0399	2887	1.134 9601	9.998 8368	16	30	
	40	8.864 1638	2870	8.865 3286	2886	1.134 6714	9.998 8352	15	20	
	50	8.864 4508	2868	8.865 6172	2883	1.134 3828	9.998 8337	16	10	
12	0	8.864 7376	2867	8.865 9055	2882	1.134 0945	9.998 8321	15	0	48
	10	8.865 0243	2864	8.866 1937	2880	1.133 8063	9.998 8306	16	50	
	20	8.865 3107	2862	8.866 4817	2878	1.133 5183	9.998 8290	15	40	
	30	8.865 5969	2861	8.866 7695	2876	1.133 2305	9.998 8275	16	30	
	40	8.865 8830	2859	8.867 0571	2874	1.132 9429	9.998 8259	15	20	
	50	8.866 1689	2856	8.867 3445	2872	1.132 6555	9.998 8244	16	10	
13	0	8.866 4545	2855	8.867 6317	2870	1.132 3683	9.998 8228	15	0	47
	10	8.866 7400	2853	8.867 9187	2869	1.132 0813	9.998 8213	16	50	
	20	8.867 0253	2851	8.868 2056	2867	1.131 7944	9.998 8197	15	40	
	30	8.867 3104	2849	8.868 4923	2864	1.131 5077	9.998 8182	16	30	
	40	8.867 5953	2848	8.868 7787	2863	1.131 2213	9.998 8166	15	20	
	50	8.867 8801	2845	8.869 0650	2861	1.130 9350	9.998 8151	16	10	
14	0	8.868 1646	2844	8.869 3511	2859	1.130 6489	9.998 8135	16	0	46
	10	8.868 4490	2841	8.869 6370	2858	1.130 3630	9.998 8119	15	50	
	20	8.868 7331	2840	8.869 9228	2855	1.130 0772	9.998 8104	16	40	
	30	8.869 0171	2838	8.870 2083	2854	1.129 7917	9.998 8088	15	30	
	40	8.869 3009	2836	8.870 4937	2852	1.129 5063	9.998 8073	16	20	
	50	8.869 5845	2835	8.870 7789	2849	1.129 2211	9.998 8057	16	10	
15	0	8.869 8680	2832	8.871 0638	2848	1.128 9362	9.998 8041	15	0	45
	10	8.870 1512	2831	8.871 3486	2847	1.128 6514	9.998 8026	16	50	
	20	8.870 4343	2828	8.871 6333	2844	1.128 3667	9.998 8010	16	40	
	30	8.870 7171	2827	8.871 9177	2842	1.128 0823	9.998 7994	15	30	
	40	8.870 9998	2825	8.872 2019	2841	1.127 7981	9.998 7979	16	20	
	50	8.871 2823	2823	8.872 4860	2839	1.127 5140	9.998 7963	16	10	
16	0	8.871 5646	2821	8.872 7699	2837	1.127 2301	9.998 7947	16	0	44
	10	8.871 8467	2820	8.873 0536	2835	1.126 9464	9.998 7931	15	50	
	20	8.872 1287	2818	8.873 3371	2834	1.126 6629	9.998 7916	16	40	
	30	8.872 4105	2815	8.873 6205	2831	1.126 3795	9.998 7900	16	30	
	40	8.872 6920	2814	8.873 9036	2830	1.126 0964	9.998 7884	15	20	
	50	8.872 9734	2812	8.874 1866	2828	1.125 8134	9.998 7869	16	10	
17	0	8.873 2546	2811	8.874 4694	2826	1.125 5306	9.998 7853	16	0	43
	10	8.873 5357	2808	8.874 7520	2824	1.125 2480	9.998 7837	16	50	
	20	8.873 8165	2807	8.875 0344	2822	1.124 9656	9.998 7821	16	40	
	30	8.874 0972	2804	8.875 3166	2821	1.124 6834	9.998 7805	15	30	
	40	8.874 3776	2803	8.875 5987	2819	1.124 4013	9.998 7790	16	20	
	50	8.874 6579	2802	8.875 8806	2817	1.124 1194	9.998 7774	16	10	
18	0	8.874 9381	2799	8.876 1623	2815	1.123 8377	9.998 7758	16	0	42
	10	8.875 2180	2797	8.876 4438	2813	1.123 5562	9.998 7742	16	50	
	20	8.875 4977	2796	8.876 7251	2812	1.123 2749	9.998 7726	16	40	
	30	8.875 7773	2794	8.877 0063	2810	1.122 9937	9.998 7710	15	30	
	40	8.876 0567	2792	8.877 2873	2808	1.122 7127	9.998 7695	16	20	
	50	8.876 3359	2791	8.877 5681	2806	1.122 4319	9.998 7679	16	10	
19	0	8.876 6150	2788	8.877 8487	2804	1.122 1513	9.998 7663	16	0	41
	10	8.876 8938	2787	8.878 1291	2803	1.121 8709	9.998 7647	16	50	
	20	8.877 1725	2785	8.878 4094	2801	1.121 5906	9.998 7631	16	40	
	30	8.877 4510	2783	8.878 6895	2799	1.121 3105	9.998 7615	16	30	
	40	8.877 7293	2781	8.878 9694	2797	1.121 0306	9.998 7599	16	20	
	50	8.878 0074	2780	8.879 2491	2795	1.120 7509	9.998 7583	16	10	
20	0	8.878 2854		8.879 5286		1.120 4714	9.998 7567		0	40
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

85°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	8.878 2854	2777	8.879 5286	2794	1.120 4714	9.998 7567	16	0	40
	10	8.878 5631	2776	8.879 8080	2792	1.120 1920	9.998 7551	16	50	
	20	8.878 8407	2774	8.880 0872	2790	1.119 9128	9.998 7535	16	40	
	30	8.879 1181	2773	8.880 3662	2788	1.119 6338	9.998 7519	16	30	
	40	8.879 3954	2770	8.880 6450	2787	1.119 3550	9.998 7503	16	20	
	50	8.879 6724	2769	8.880 9237	2785	1.119 0763	9.998 7487	16	10	
21	0	8.879 9493	2767	8.881 2022	2783	1.118 7978	9.998 7471	16	0	39
	10	8.880 2260	2766	8.881 4805	2781	1.118 5195	9.998 7455	16	50	
	20	8.880 5026	2763	8.881 7586	2780	1.118 2414	9.998 7439	16	40	
	30	8.880 7789	2762	8.882 0366	2778	1.117 9634	9.998 7423	16	30	
	40	8.881 0551	2760	8.882 3144	2776	1.117 6856	9.998 7407	16	20	
	50	8.881 3311	2758	8.882 5920	2774	1.117 4080	9.998 7391	16	10	
22	0	8.881 6069	2756	8.882 8694	2773	1.117 1306	9.998 7375	16	0	38
	10	8.881 8825	2755	8.883 1467	2770	1.116 8533	9.998 7359	16	50	
	20	8.882 1580	2753	8.883 4237	2769	1.116 5763	9.998 7343	16	40	
	30	8.882 4333	2751	8.883 7006	2768	1.116 2994	9.998 7327	16	30	
	40	8.882 7084	2750	8.883 9774	2765	1.116 0226	9.998 7311	16	20	
	50	8.882 9834	2747	8.884 2539	2764	1.115 7461	9.998 7295	17	10	
23	0	8.883 2581	2746	8.884 5303	2762	1.115 4697	9.998 7278	16	0	37
	10	8.883 5327	2745	8.884 8065	2760	1.115 1935	9.998 7262	16	50	
	20	8.883 8072	2742	8.885 0825	2759	1.114 9175	9.998 7246	16	40	
	30	8.884 0814	2741	8.885 3584	2757	1.114 6416	9.998 7230	16	30	
	40	8.884 3555	2739	8.885 6341	2755	1.114 3659	9.998 7214	16	20	
	50	8.884 6294	2737	8.885 9096	2754	1.114 0904	9.998 7198	17	10	
24	0	8.884 9031	2735	8.886 1850	2751	1.113 8150	9.998 7181	16	0	36
	10	8.885 1766	2734	8.886 4601	2750	1.113 5399	9.998 7165	16	50	
	20	8.885 4500	2732	8.886 7351	2749	1.113 2649	9.998 7149	16	40	
	30	8.885 7232	2731	8.887 0100	2746	1.112 9900	9.998 7133	17	30	
	40	8.885 9963	2728	8.887 2846	2745	1.112 7154	9.998 7116	16	20	
	50	8.886 2691	2727	8.887 5591	2743	1.112 4409	9.998 7100	16	10	
25	0	8.886 5418	2725	8.887 8334	2741	1.112 1666	9.998 7084	16	0	35
	10	8.886 8143	2724	8.888 1075	2740	1.111 8925	9.998 7068	17	50	
	20	8.887 0867	2721	8.888 3815	2738	1.111 6185	9.998 7051	16	40	
	30	8.887 3588	2720	8.888 6553	2736	1.111 3447	9.998 7035	16	30	
	40	8.887 6308	2719	8.888 9289	2735	1.111 0711	9.998 7019	16	20	
	50	8.887 9027	2716	8.889 2024	2733	1.110 7976	9.998 7003	17	10	
26	0	8.888 1743	2715	8.889 4757	2731	1.110 5243	9.998 6986	16	0	34
	10	8.888 4458	2713	8.889 7488	2730	1.110 2512	9.998 6970	16	50	
	20	8.888 7171	2712	8.890 0218	2727	1.109 9782	9.998 6954	17	40	
	30	8.888 9883	2709	8.890 2945	2726	1.109 7055	9.998 6937	16	30	
	40	8.889 2592	2708	8.890 5671	2725	1.109 4329	9.998 6921	17	20	
	50	8.889 5300	2707	8.890 8396	2723	1.109 1604	9.998 6904	16	10	
27	0	8.889 8007	2704	8.891 1119	2721	1.108 8881	9.998 6888	16	0	33
	10	8.890 0711	2703	8.891 3840	2719	1.108 6160	9.998 6872	17	50	
	20	8.890 3414	2702	8.891 6559	2718	1.108 3441	9.998 6855	16	40	
	30	8.890 6116	2699	8.891 9277	2716	1.108 0723	9.998 6839	17	30	
	40	8.890 8815	2698	8.892 1993	2714	1.107 8007	9.998 6822	16	20	
	50	8.891 1513	2696	8.892 4707	2713	1.107 5293	9.998 6806	16	10	
28	0	8.891 4209	2695	8.892 7420	2711	1.107 2580	9.998 6790	17	0	32
	10	8.891 6904	2693	8.893 0131	2709	1.106 9869	9.998 6773	16	50	
	20	8.891 9597	2691	8.893 2840	2708	1.106 7160	9.998 6757	17	40	
	30	8.892 2288	2689	8.893 5548	2706	1.106 4452	9.998 6740	16	30	
	40	8.892 4977	2688	8.893 8254	2704	1.106 1746	9.998 6724	17	20	
	50	8.892 7665	2686	8.894 0958	2702	1.105 9042	9.998 6707	16	10	
29	0	8.893 0351	2685	8.894 3660	2701	1.105 6340	9.998 6691	17	0	31
	10	8.893 3036	2682	8.894 6361	2700	1.105 3639	9.998 6674	16	50	
	20	8.893 5718	2682	8.894 9061	2697	1.105 0939	9.998 6658	17	40	
	30	8.893 8400	2679	8.895 1758	2696	1.104 8242	9.998 6641	16	30	
	40	8.894 1079	2678	8.895 4454	2695	1.104 5546	9.998 6625	17	20	
	50	8.894 3757	2676	8.895 7149	2693	1.104 2851	9.998 6608	17	10	
30	0	8.894 6433		8.895 9842		1.104 0158	9.998 6591		0	30
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

85°

′	″	Sin	c.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	8.894 6433	2674	8.895 9842	2691	1.104 0158	9.998 6591	16	0	30
	10	8.894 9107	2673	8.896 2533	2689	1.103 7467	9.998 6575	17	50	
	20	8.895 1780	2671	8.896 5222	2688	1.103 4778	9.998 6558	16	40	
	30	8.895 4451	2670	8.896 7910	2686	1.103 2090	9.998 6542	17	30	
	40	8.895 7121	2668	8.897 0596	2684	1.102 9404	9.998 6525	17	20	
	50	8.895 9789	2666	8.897 3280	2683	1.102 6720	9.998 6508	16	10	
31	0	8.896 2455	2665	8.897 5963	2681	1.102 4037	9.998 6492	17	0	29
	10	8.896 5120	2663	8.897 8644	2680	1.102 1356	9.998 6475	16	50	
	20	8.896 7783	2661	8.898 1324	2678	1.101 8676	9.998 6459	17	40	
	30	8.897 0444	2660	8.898 4002	2676	1.101 5998	9.998 6442	17	30	
	40	8.897 3104	2658	8.898 6678	2675	1.101 3322	9.998 6425	16	20	
	50	8.897 5762	2656	8.898 9353	2673	1.101 0647	9.998 6409	17	10	
32	0	8.897 8418	2655	8.899 2026	2672	1.100 7974	9.998 6392	17	0	28
	10	8.898 1073	2653	8.899 4698	2669	1.100 5302	9.998 6375	17	50	
	20	8.898 3726	2651	8.899 7367	2669	1.100 2633	9.998 6358	16	40	
	30	8.898 6377	2650	8.900 0036	2666	1.099 9964	9.998 6342	17	30	
	40	8.898 9027	2648	8.900 2702	2665	1.099 7298	9.998 6325	17	20	
	50	8.899 1675	2647	8.900 5367	2663	1.099 4633	9.998 6308	16	10	
33	0	8.899 4322	2645	8.900 8030	2662	1.099 1970	9.998 6292	17	0	27
	10	8.899 6967	2643	8.901 0692	2660	1.098 9308	9.998 6275	17	50	
	20	8.899 9610	2642	8.901 3352	2659	1.098 6648	9.998 6258	17	40	
	30	8.900 2252	2640	8.901 6011	2657	1.098 3989	9.998 6241	17	30	
	40	8.900 4892	2639	8.901 8668	2655	1.098 1332	9.998 6224	16	20	
	50	8.900 7531	2637	8.902 1323	2654	1.097 8677	9.998 6208	17	10	
34	0	8.901 0168	2635	8.902 3977	2652	1.097 6023	9.998 6191	17	0	26
	10	8.901 2803	2634	8.902 6629	2650	1.097 3371	9.998 6174	17	50	
	20	8.901 5437	2632	8.902 9279	2649	1.097 0721	9.998 6157	17	40	
	30	8.901 8069	2630	8.903 1928	2648	1.096 8072	9.998 6140	17	30	
	40	8.902 0699	2629	8.903 4576	2645	1.096 5424	9.998 6123	16	20	
	50	8.902 3328	2627	8.903 7221	2645	1.096 2779	9.998 6107	17	10	
35	0	8.902 5955	2626	8.903 9866	2642	1.096 0134	9.998 6090	17	0	25
	10	8.902 8581	2624	8.904 2508	2641	1.095 7492	9.998 6073	17	50	
	20	8.903 1205	2623	8.904 5149	2639	1.095 4851	9.998 6056	17	40	
	30	8.903 3828	2620	8.904 7788	2638	1.095 2212	9.998 6039	17	30	
	40	8.903 6448	2620	8.905 0426	2637	1.094 9574	9.998 6022	17	20	
	50	8.903 9068	2617	8.905 3063	2634	1.094 6937	9.998 6005	17	10	
36	0	8.904 1685	2617	8.905 5697	2633	1.094 4303	9.998 5988	17	0	24
	10	8.904 4302	2614	8.905 8330	2632	1.094 1670	9.998 5971	17	50	
	20	8.904 6916	2613	8.906 0962	2630	1.093 9038	9.998 5954	17	40	
	30	8.904 9529	2611	8.906 3592	2628	1.093 6408	9.998 5937	17	30	
	40	8.905 2140	2610	8.906 6220	2627	1.093 3780	9.998 5920	17	20	
	50	8.905 4750	2608	8.906 8847	2625	1.093 1153	9.998 5903	17	10	
37	0	8.905 7358	2607	8.907 1472	2624	1.092 8528	9.998 5886	17	0	23
	10	8.905 9965	2605	8.907 4096	2622	1.092 5904	9.998 5869	17	50	
	20	8.906 2570	2604	8.907 6718	2620	1.092 3282	9.998 5852	17	40	
	30	8.906 5174	2602	8.907 9338	2619	1.092 0662	9.998 5835	17	30	
	40	8.906 7776	2600	8.908 1957	2618	1.091 8043	9.998 5818	17	20	
	50	8.907 0376	2599	8.908 4575	2615	1.091 5425	9.998 5801	17	10	
38	0	8.907 2975	2597	8.908 7190	2615	1.091 2810	9.998 5784	17	0	22
	10	8.907 5572	2596	8.908 9805	2612	1.091 0195	9.998 5767	17	50	
	20	8.907 8168	2594	8.909 2417	2612	1.090 7583	9.998 5750	17	40	
	30	8.908 0762	2592	8.909 5029	2609	1.090 4971	9.998 5733	17	30	
	40	8.908 3354	2591	8.909 7638	2608	1.090 2362	9.998 5716	17	20	
	50	8.908 5945	2590	8.910 0246	2607	1.089 9754	9.998 5699	17	10	
39	0	8.908 8535	2588	8.910 2853	2605	1.089 7147	9.998 5682	17	0	21
	10	8.909 1123	2586	8.910 5458	2603	1.089 4542	9.998 5665	18	50	
	20	8.909 3709	2585	8.910 8061	2602	1.089 1939	9.998 5647	17	40	
	30	8.909 6294	2583	8.911 0663	2601	1.088 9337	9.998 5630	17	30	
	40	8.909 8877	2582	8.911 3264	2599	1.088 6736	9.998 5613	17	20	
	50	8.910 1459	2580	8.911 5863	2597	1.088 4137	9.998 5596	17	10	
40	0	8.910 4039		8.911 8460		1.088 1540	9.998 5579		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

4°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	8.910 4039	2578	8.911 8460	2596	1.088 1540	9.998 5579	17	0	20
	10	8.910 6617	2577	8.912 1056	2594	1.087 8944	9.998 5562	18	50	
	20	8.910 9194	2576	8.912 3650	2593	1.087 6350	9.998 5544	17	40	
	30	8.911 1770	2574	8.912 6243	2591	1.087 3757	9.998 5527	17	30	
	40	8.911 4344	2572	8.912 8834	2590	1.087 1166	9.998 5510	17	20	
	50	8.911 6916	2571	8.913 1424	2588	1.086 8576	9.998 5493	18	10	
41	0	8.911 9487	2570	8.913 4012	2586	1.086 5988	9.998 5475	17	0	19
	10	8.912 2057	2567	8.913 6598	2585	1.086 3402	9.998 5458	17	50	
	20	8.912 4624	2567	8.913 9183	2584	1.086 0817	9.998 5441	17	40	
	30	8.912 7191	2565	8.914 1767	2582	1.085 8233	9.998 5424	18	30	
	40	8.912 9756	2563	8.914 4349	2581	1.085 5651	9.998 5406	17	20	
	50	8.913 2319	2562	8.914 6930	2579	1.085 3070	9.998 5389	17	10	
42	0	8.913 4881	2560	8.914 9509	2577	1.085 0491	9.998 5372	18	0	18
	10	8.913 7441	2558	8.915 2086	2576	1.084 7914	9.998 5354	17	50	
	20	8.913 9999	2558	8.915 4662	2575	1.084 5338	9.998 5337	17	40	
	30	8.914 2557	2555	8.915 7237	2573	1.084 2763	9.998 5320	18	30	
	40	8.914 5112	2555	8.915 9810	2571	1.084 0190	9.998 5302	17	20	
	50	8.914 7667	2552	8.916 2381	2571	1.083 7619	9.998 5285	17	10	
43	0	8.915 0219	2551	8.916 4952	2568	1.083 5048	9.998 5268	18	0	17
	10	8.915 2770	2550	8.916 7520	2567	1.083 2480	9.998 5250	17	50	
	20	8.915 5320	2548	8.917 0087	2566	1.082 9913	9.998 5233	17	40	
	30	8.915 7868	2547	8.917 2653	2564	1.082 7347	9.998 5216	18	30	
	40	8.916 0415	2545	8.917 5217	2562	1.082 4783	9.998 5198	17	20	
	50	8.916 2960	2544	8.917 7779	2561	1.082 2221	9.998 5181	18	10	
44	0	8.916 5504	2542	8.918 0340	2560	1.081 9660	9.998 5163	17	0	16
	10	8.916 8046	2540	8.918 2900	2558	1.081 7100	9.998 5146	18	50	
	20	8.917 0586	2539	8.918 5458	2556	1.081 4542	9.998 5128	17	40	
	30	8.917 3125	2538	8.918 8014	2556	1.081 1986	9.998 5111	18	30	
	40	8.917 5663	2536	8.919 0570	2553	1.080 9430	9.998 5093	17	20	
	50	8.917 8199	2535	8.919 3123	2552	1.080 6877	9.998 5076	18	10	
45	0	8.918 0734	2533	8.919 5675	2551	1.080 4325	9.998 5058	17	0	15
	10	8.918 3267	2532	8.919 8226	2549	1.080 1774	9.998 5041	18	50	
	20	8.918 5799	2530	8.920 0775	2548	1.079 9225	9.998 5023	17	40	
	30	8.918 8329	2529	8.920 3323	2546	1.079 6677	9.998 5006	18	30	
	40	8.919 0858	2527	8.920 5869	2545	1.079 4131	9.998 4988	17	20	
	50	8.919 3385	2526	8.920 8414	2543	1.079 1586	9.998 4971	18	10	
46	0	8.919 5911	2524	8.921 0957	2542	1.078 9043	9.998 4953	17	0	14
	10	8.919 8435	2523	8.921 3499	2540	1.078 6501	9.998 4936	18	50	
	20	8.920 0958	2521	8.921 6039	2539	1.078 3961	9.998 4918	17	40	
	30	8.920 3479	2520	8.921 8578	2538	1.078 1422	9.998 4901	18	30	
	40	8.920 5999	2518	8.922 1116	2536	1.077 8884	9.998 4883	18	20	
	50	8.920 8517	2517	8.922 3652	2534	1.077 6348	9.998 4865	17	10	
47	0	8.921 1034	2516	8.922 6186	2533	1.077 3814	9.998 4848	18	0	13
	10	8.921 3550	2514	8.922 8719	2532	1.077 1281	9.998 4830	17	50	
	20	8.921 6064	2512	8.923 1251	2530	1.076 8749	9.998 4813	18	40	
	30	8.921 8576	2511	8.923 3781	2529	1.076 6219	9.998 4795	18	30	
	40	8.922 1087	2510	8.923 6310	2527	1.076 3690	9.998 4777	17	20	
	50	8.922 3597	2508	8.923 8837	2526	1.076 1163	9.998 4760	18	10	
48	0	8.922 6105	2506	8.924 1363	2524	1.075 8637	9.998 4742	18	0	12
	10	8.922 8611	2506	8.924 3887	2523	1.075 6113	9.998 4724	17	50	
	20	8.923 1117	2503	8.924 6410	2522	1.075 3590	9.998 4707	18	40	
	30	8.923 3620	2503	8.924 8932	2520	1.075 1068	9.998 4689	18	30	
	40	8.923 6123	2501	8.925 1452	2518	1.074 8548	9.998 4671	18	20	
	50	8.923 8624	2499	8.925 3970	2517	1.074 6030	9.998 4653	17	10	
49	0	8.924 1123	2498	8.925 6487	2516	1.074 3513	9.998 4636	18	0	11
	10	8.924 3621	2496	8.925 9003	2514	1.074 0997	9.998 4618	18	50	
	20	8.924 6117	2496	8.926 1517	2513	1.073 8483	9.998 4600	18	40	
	30	8.924 8613	2493	8.926 4030	2512	1.073 5970	9.998 4582	17	30	
	40	8.925 1106	2492	8.926 6542	2510	1.073 3458	9.998 4565	18	20	
	50	8.925 3598	2491	8.926 9052	2508	1.073 0948	9.998 4547	18	10	
50	0	8.925 6089		8.927 1560		1.072 8440	9.998 4529		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

85°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	8.925 6089	2489	8.927 1560	2507	1.072 8440	9.998 4529	18	0	10
	10	8.925 8578	2488	8.927 4067	2506	1.072 5933	9.998 4511	18	50	
	20	8.926 1066	2487	8.927 6573	2504	1.072 3427	9.998 4493	17	40	
	30	8.926 3553	2485	8.927 9077	2503	1.072 0923	9.998 4476	18	30	
	40	8.926 6038	2483	8.928 1580	2501	1.071 8420	9.998 4458	18	20	
	50	8.926 8521	2482	8.928 4081	2500	1.071 5919	9.998 4440	18	10	
51	0	8.927 1003	2481	8.928 6581	2499	1.071 3419	9.998 4422	18	0	9
	10	8.927 3484	2479	8.928 9080	2497	1.071 0920	9.998 4404	18	50	
	20	8.927 5963	2478	8.929 1577	2496	1.070 8423	9.998 4386	18	40	
	30	8.927 8441	2477	8.929 4073	2494	1.070 5927	9.998 4368	18	30	
	40	8.928 0918	2475	8.929 6567	2493	1.070 3433	9.998 4350	17	20	
	50	8.928 3393	2473	8.929 9060	2492	1.070 0940	9.998 4333	18	10	
52	0	8.928 5866	2472	8.930 1552	2490	1.069 8448	9.998 4315	18	0	8
	10	8.928 8338	2471	8.930 4042	2488	1.069 5958	9.998 4297	18	50	
	20	8.929 0809	2470	8.930 6530	2488	1.069 3470	9.998 4279	18	40	
	30	8.929 3279	2467	8.930 9018	2486	1.069 0982	9.998 4261	18	30	
	40	8.929 5746	2467	8.931 1504	2484	1.068 8496	9.998 4243	18	20	
	50	8.929 8213	2465	8.931 3988	2483	1.068 6012	9.998 4225	18	10	
53	0	8.930 0678	2464	8.931 6471	2482	1.068 3529	9.998 4207	18	0	7
	10	8.930 3142	2462	8.931 8953	2480	1.068 1047	9.998 4189	18	50	
	20	8.930 5604	2461	8.932 1433	2479	1.067 8567	9.998 4171	18	40	
	30	8.930 8065	2459	8.932 3912	2478	1.067 6088	9.998 4153	18	30	
	40	8.931 0524	2459	8.932 6390	2476	1.067 3610	9.998 4135	18	20	
	50	8.931 2983	2456	8.932 8866	2474	1.067 1134	9.998 4117	18	10	
54	0	8.931 5439	2456	8.933 1340	2474	1.066 8660	9.998 4099	18	0	6
	10	8.931 7895	2453	8.933 3814	2472	1.066 6186	9.998 4081	18	50	
	20	8.932 0348	2453	8.933 6286	2470	1.066 3714	9.998 4063	18	40	
	30	8.932 2801	2451	8.933 8756	2470	1.066 1244	9.998 4045	19	30	
	40	8.932 5252	2450	8.934 1226	2467	1.065 8774	9.998 4026	18	20	
	50	8.932 7702	2448	8.934 3693	2467	1.065 6307	9.998 4008	18	10	
55	0	8.933 0150	2447	8.934 6160	2465	1.065 3840	9.998 3990	18	0	5
	10	8.933 2597	2445	8.934 8625	2463	1.065 1375	9.998 3972	18	50	
	20	8.933 5042	2445	8.935 1088	2463	1.064 8912	9.998 3954	18	40	
	30	8.933 7487	2442	8.935 3551	2461	1.064 6449	9.998 3936	18	30	
	40	8.933 9929	2442	8.935 6012	2459	1.064 3988	9.998 3918	18	20	
	50	8.934 2371	2440	8.935 8471	2458	1.064 1529	9.998 3900	19	10	
56	0	8.934 4811	2438	8.936 0929	2457	1.063 9071	9.998 3881	18	0	4
	10	8.934 7249	2438	8.936 3386	2456	1.063 6614	9.998 3863	18	50	
	20	8.934 9687	2435	8.936 5842	2454	1.063 4158	9.998 3845	18	40	
	30	8.935 2122	2435	8.936 8296	2452	1.063 1704	9.998 3827	18	30	
	40	8.935 4557	2433	8.937 0748	2452	1.062 9252	9.998 3809	19	20	
	50	8.935 6990	2432	8.937 3200	2450	1.062 6800	9.998 3790	18	10	
57	0	8.935 9422	2430	8.937 5650	2448	1.062 4350	9.998 3772	18	0	3
	10	8.936 1852	2429	8.937 8098	2447	1.062 1902	9.998 3754	18	50	
	20	8.936 4281	2428	8.938 0545	2446	1.061 9455	9.998 3736	19	40	
	30	8.936 6709	2426	8.938 2991	2445	1.061 7009	9.998 3717	18	30	
	40	8.936 9135	2425	8.938 5436	2443	1.061 4564	9.998 3699	18	20	
	50	8.937 1560	2423	8.938 7879	2442	1.061 2121	9.998 3681	18	10	
58	0	8.937 3983	2423	8.939 0321	2440	1.060 9679	9.998 3663	19	0	2
	10	8.937 6406	2420	8.939 2761	2439	1.060 7239	9.998 3644	18	50	
	20	8.937 8826	2420	8.939 5200	2438	1.060 4800	9.998 3626	18	40	
	30	8.938 1246	2418	8.939 7638	2437	1.060 2362	9.998 3608	19	30	
	40	8.938 3664	2417	8.940 0075	2435	1.059 9925	9.998 3589	18	20	
	50	8.938 6081	2415	8.940 2510	2434	1.059 7490	9.998 3571	18	10	
59	0	8.938 8496	2414	8.940 4944	2432	1.059 5056	9.998 3553	19	0	1
	10	8.939 0910	2413	8.940 7376	2431	1.059 2624	9.998 3534	18	50	
	20	8.939 3323	2411	8.940 9807	2430	1.059 0193	9.998 3516	19	40	
	30	8.939 5734	2410	8.941 2237	2428	1.058 7763	9.998 3497	18	30	
	40	8.939 8144	2409	8.941 4665	2427	1.058 5335	9.998 3479	18	20	
	50	8.940 0553	2407	8.941 7092	2426	1.058 2908	9.998 3461	19	10	
60	0	8.940 2960		8.941 9518		1.058 0482	9.998 3442		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

5°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	8.940 2960	2406	8.941 9518	2424	1.058 0482	9.998 3442	18	0	60
	10	8.940 5366	2405	8.942 1942	2423	1.057 8058	9.998 3424	19	50	
	20	8.940 7771	2403	8.942 4365	2422	1.057 5635	9.998 3405	18	40	
	30	8.941 0174	2402	8.942 6787	2420	1.057 3213	9.998 3387	19	30	
	40	8.941 2576	2400	8.942 9207	2419	1.057 0793	9.998 3368	18	20	
	50	8.941 4976	2400	8.943 1626	2418	1.056 8374	9.998 3350	18	10	
1	0	8.941 7376	2398	8.943 4044	2417	1.056 5956	9.998 3332	19	0	59
	10	8.941 9774	2396	8.943 6461	2415	1.056 3539	9.998 3313	18	50	
	20	8.942 2170	2395	8.943 8876	2413	1.056 1124	9.998 3295	19	40	
	30	8.942 4565	2394	8.944 1289	2413	1.055 8711	9.998 3276	18	30	
	40	8.942 6959	2393	8.944 3702	2411	1.055 6298	9.998 3258	19	20	
	50	8.942 9352	2391	8.944 6113	2410	1.055 3887	9.998 3239	19	10	
2	0	8.943 1743	2390	8.944 8523	2408	1.055 1477	9.998 3220	18	0	58
	10	8.943 4133	2389	8.945 0931	2407	1.054 9069	9.998 3202	19	50	
	20	8.943 6522	2387	8.945 3338	2406	1.054 6662	9.998 3183	18	40	
	30	8.943 8909	2386	8.945 5744	2405	1.054 4256	9.998 3165	19	30	
	40	8.944 1295	2385	8.945 8149	2403	1.054 1851	9.998 3146	18	20	
	50	8.944 3680	2383	8.946 0552	2402	1.053 9448	9.998 3128	19	10	
3	0	8.944 6063	2382	8.946 2954	2401	1.053 7046	9.998 3109	19	0	57
	10	8.944 8445	2381	8.946 5355	2399	1.053 4645	9.998 3090	18	50	
	20	8.945 0826	2379	8.946 7754	2398	1.053 2246	9.998 3072	19	40	
	30	8.945 3205	2378	8.947 0152	2397	1.052 9848	9.998 3053	18	30	
	40	8.945 5583	2377	8.947 2549	2395	1.052 7451	9.998 3035	19	20	
	50	8.945 7960	2375	8.947 4944	2394	1.052 5056	9.998 3016	19	10	
4	0	8.946 0335	2374	8.947 7338	2393	1.052 2662	9.998 2997	18	0	56
	10	8.946 2709	2373	8.947 9731	2391	1.052 0269	9.998 2979	19	50	
	20	8.946 5082	2372	8.948 2122	2391	1.051 7878	9.998 2960	19	40	
	30	8.946 7454	2370	8.948 4513	2389	1.051 5487	9.998 2941	19	30	
	40	8.946 9824	2369	8.948 6902	2387	1.051 3098	9.998 2922	18	20	
	50	8.947 2193	2368	8.948 9289	2387	1.051 0711	9.998 2904	19	10	
5	0	8.947 4561	2366	8.949 1676	2385	1.050 8324	9.998 2885	19	0	55
	10	8.947 6927	2365	8.949 4061	2383	1.050 5939	9.998 2866	18	50	
	20	8.947 9292	2364	8.949 6444	2383	1.050 3556	9.998 2848	19	40	
	30	8.948 1656	2362	8.949 8827	2381	1.050 1173	9.998 2829	19	30	
	40	8.948 4018	2361	8.950 1208	2380	1.049 8792	9.998 2810	19	20	
	50	8.948 6379	2360	8.950 3588	2379	1.049 6412	9.998 2791	19	10	
6	0	8.948 8739	2359	8.950 5967	2377	1.049 4033	9.998 2772	18	0	54
	10	8.949 1098	2357	8.950 8344	2376	1.049 1656	9.998 2754	19	50	
	20	8.949 3455	2356	8.951 0720	2375	1.048 9280	9.998 2735	19	40	
	30	8.949 5811	2354	8.951 3095	2373	1.048 6905	9.998 2716	19	30	
	40	8.949 8165	2354	8.951 5468	2372	1.048 4532	9.998 2697	19	20	
	50	8.950 0519	2352	8.951 7840	2371	1.048 2160	9.998 2678	18	10	
7	0	8.950 2871	2351	8.952 0211	2370	1.047 9789	9.998 2660	19	0	53
	10	8.950 5222	2349	8.952 2581	2368	1.047 7419	9.998 2641	19	50	
	20	8.950 7571	2349	8.952 4949	2368	1.047 5051	9.998 2622	19	40	
	30	8.950 9920	2347	8.952 7317	2365	1.047 2683	9.998 2603	19	30	
	40	8.951 2267	2345	8.952 9682	2365	1.047 0318	9.998 2584	19	20	
	50	8.951 4612	2345	8.953 2047	2363	1.046 7953	9.998 2565	19	10	
8	0	8.951 6957	2343	8.953 4410	2363	1.046 5590	9.998 2546	19	0	52
	10	8.951 9300	2342	8.953 6773	2360	1.046 3227	9.998 2527	19	50	
	20	8.952 1642	2340	8.953 9133	2360	1.046 0867	9.998 2508	19	40	
	30	8.952 3982	2340	8.954 1493	2358	1.045 8507	9.998 2489	19	30	
	40	8.952 6322	2338	8.954 3851	2357	1.045 6149	9.998 2470	18	20	
	50	8.952 8660	2336	8.954 6208	2356	1.045 3792	9.998 2452	19	10	
9	0	8.953 0996	2336	8.954 8564	2354	1.045 1436	9.998 2433	19	0	51
	10	8.953 3332	2334	8.955 0918	2354	1.044 9082	9.998 2414	19	50	
	20	8.953 5666	2333	8.955 3272	2352	1.044 6728	9.998 2395	19	40	
	30	8.953 7999	2332	8.955 5624	2350	1.044 4376	9.998 2376	19	30	
	40	8.954 0331	2330	8.955 7974	2350	1.044 2026	9.998 2357	19	20	
	50	8.954 2661	2330	8.956 0324	2348	1.043 9676	9.998 2338	20	10	
10	0	8.954 4991		8.956 2672		1.043 7328	9.998 2318		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

84°

2410	
1	241
2	482
3	723
4	964
5	1205
6	1446
7	1687
8	1928
9	2169

2400	
1	240
2	480
3	720
4	960
5	1200
6	1440
7	1680
8	1920
9	2160

2390	
1	239
2	478
3	717
4	956
5	1195
6	1434
7	1673
8	1912
9	2151

2380	
1	238
2	476
3	714
4	952
5	1190
6	1428
7	1666
8	1904
9	2142

2370	
1	237
2	474
3	711
4	948
5	1185
6	1422
7	1659
8	1896
9	2133

2360	
1	236
2	472
3	708
4	944
5	1180
6	1416
7	1652
8	1888
9	2124

2350	
1	235
2	470
3	705
4	940
5	1175
6	1410
7	1645
8	1880
9	2115

2340	
1	234
2	468
3	702
4	936
5	1170
6	1404
7	1638
8	1872
9	2106

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	8.954 4991	2328	8.956 2672	2347	1.043 7328	9.998 2318	19	0	50
	10	8.954 7319	2326	8.956 5019	2346	1.043 4981	9.998 2299	19	50	
	20	8.954 9645	2326	8.956 7365	2344	1.043 2635	9.998 2280	19	40	
	30	8.955 1971	2324	8.956 9709	2344	1.043 0291	9.998 2261	19	30	
	40	8.955 4295	2323	8.957 2053	2342	1.042 7947	9.998 2242	19	20	
	50	8.955 6618	2322	8.957 4395	2340	1.042 5605	9.998 2223	19	10	
11	0	8.955 8940	2320	8.957 6735	2340	1.042 3265	9.998 2204	19	0	49
	10	8.956 1260	2319	8.957 9075	2338	1.042 0925	9.998 2185	19	50	
	20	8.956 3579	2318	8.958 1413	2337	1.041 8587	9.998 2166	19	40	
	30	8.956 5897	2317	8.958 3750	2336	1.041 6250	9.998 2147	19	30	
	40	8.956 8214	2315	8.958 6086	2335	1.041 3914	9.998 2128	20	20	
	50	8.957 0529	2314	8.958 8421	2333	1.041 1579	9.998 2108	19	10	
12	0	8.957 2843	2313	8.959 0754	2332	1.040 9246	9.998 2089	19	0	48
	10	8.957 5156	2312	8.959 3086	2331	1.040 6914	9.998 2070	19	50	
	20	8.957 7468	2311	8.959 5417	2330	1.040 4583	9.998 2051	19	40	
	30	8.957 9779	2309	8.959 7747	2328	1.040 2253	9.998 2032	19	30	
	40	8.958 2088	2308	8.960 0075	2327	1.039 9925	9.998 2013	20	20	
	50	8.958 4396	2307	8.960 2402	2326	1.039 7598	9.998 1993	19	10	
13	0	8.958 6703	2305	8.960 4728	2325	1.039 5272	9.998 1974	19	0	47
	10	8.958 9008	2304	8.960 7053	2324	1.039 2947	9.998 1955	19	50	
	20	8.959 1312	2303	8.960 9377	2322	1.039 0623	9.998 1936	20	40	
	30	8.959 3615	2302	8.961 1699	2321	1.038 8301	9.998 1916	19	30	
	40	8.959 5917	2301	8.961 4020	2320	1.038 5980	9.998 1897	19	20	
	50	8.959 8218	2299	8.961 6340	2319	1.038 3660	9.998 1878	19	10	
14	0	8.960 0517	2298	8.961 8659	2317	1.038 1341	9.998 1859	20	0	46
	10	8.960 2815	2297	8.962 0976	2316	1.037 9024	9.998 1839	19	50	
	20	8.960 5112	2296	8.962 3292	2315	1.037 6708	9.998 1820	19	40	
	30	8.960 7408	2294	8.962 5607	2314	1.037 4393	9.998 1801	20	30	
	40	8.960 9702	2294	8.962 7921	2313	1.037 2079	9.998 1781	19	20	
	50	8.961 1996	2292	8.963 0234	2311	1.036 9766	9.998 1762	19	10	
15	0	8.961 4288	2291	8.963 2545	2310	1.036 7455	9.998 1743	20	0	45
	10	8.961 6579	2289	8.963 4855	2309	1.036 5145	9.998 1723	19	50	
	20	8.961 8868	2289	8.963 7164	2308	1.036 2836	9.998 1704	19	40	
	30	8.962 1157	2287	8.963 9472	2306	1.036 0528	9.998 1685	20	30	
	40	8.962 3444	2286	8.964 1778	2306	1.035 8222	9.998 1665	19	20	
	50	8.962 5730	2284	8.964 4084	2304	1.035 5916	9.998 1646	20	10	
16	0	8.962 8014	2284	8.964 6388	2303	1.035 3612	9.998 1626	19	0	44
	10	8.963 0298	2282	8.964 8691	2302	1.035 1309	9.998 1607	19	50	
	20	8.963 2580	2281	8.965 0993	2300	1.034 9007	9.998 1588	20	40	
	30	8.963 4861	2280	8.965 3293	2299	1.034 6707	9.998 1568	19	30	
	40	8.963 7141	2279	8.965 5592	2299	1.034 4408	9.998 1549	20	20	
	50	8.963 9420	2277	8.965 7891	2297	1.034 2109	9.998 1529	19	10	
17	0	8.964 1697	2277	8.966 0188	2295	1.033 9812	9.998 1510	20	0	43
	10	8.964 3974	2275	8.966 2483	2295	1.033 7517	9.998 1490	19	50	
	20	8.964 6249	2274	8.966 4778	2293	1.033 5222	9.998 1471	20	40	
	30	8.964 8523	2272	8.966 7071	2292	1.033 2929	9.998 1451	19	30	
	40	8.965 0795	2272	8.966 9363	2291	1.033 0637	9.998 1432	20	20	
	50	8.965 3067	2270	8.967 1654	2290	1.032 8346	9.998 1412	19	10	
18	0	8.965 5337	2269	8.967 3944	2289	1.032 6056	9.998 1393	20	0	42
	10	8.965 7606	2268	8.967 6233	2287	1.032 3767	9.998 1373	19	50	
	20	8.965 9874	2267	8.967 8520	2287	1.032 1480	9.998 1354	20	40	
	30	8.966 2141	2265	8.968 0807	2285	1.031 9193	9.998 1334	19	30	
	40	8.966 4406	2265	8.968 3092	2284	1.031 6908	9.998 1315	20	20	
	50	8.966 6671	2263	8.968 5376	2282	1.031 4624	9.998 1295	20	10	
19	0	8.966 8934	2262	8.968 7658	2282	1.031 2342	9.998 1275	19	0	41
	10	8.967 1196	2260	8.968 9940	2280	1.031 0060	9.998 1256	20	50	
	20	8.967 3456	2260	8.969 2220	2279	1.030 7780	9.998 1236	19	40	
	30	8.967 5716	2258	8.969 4499	2278	1.030 5501	9.998 1217	20	30	
	40	8.967 7974	2257	8.969 6777	2277	1.030 3223	9.998 1197	20	20	
	50	8.968 0231	2256	8.969 9054	2276	1.030 0946	9.998 1177	19	10	
20	0	8.968 2487		8.970 1330		1.029 8670	9.998 1158		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	2330	2320	2310	2300	2290	2280	2270	2260
1	233	232	231	230	229	228	227	226
2	466	464	462	460	458	456	454	452
3	699	696	693	690	687	684	681	678
4	932	928	924	920	916	912	908	904
5	1165	1160	1155	1150	1145	1140	1135	1130
6	1398	1392	1386	1380	1374	1368	1362	1356
7	1631	1624	1617	1610	1603	1596	1589	1582
8	1864	1856	1848	1840	1832	1824	1816	1808
9	2097	2088	2079	2070	2061	2052	2043	2034

	2270	2260	2250	2240	2230	2220	2210	2200
1	227	226	225	224	223	222	221	220
2	454	452	450	448	446	444	442	440
3	681	678	675	672	669	666	663	660
4	908	904	900	896	892	888	884	880
5	1135	1130	1125	1120	1115	1110	1105	1100
6	1362	1356	1350	1344	1338	1332	1326	1320
7	1589	1582	1575	1568	1561	1554	1547	1540
8	1816	1808	1800	1792	1784	1776	1768	1760
9	2043	2034	2025	2016	2007	1998	1989	1980

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	8.968 2487	2255	8.970 1330	2274	1.029 8670	9.998 1158	20	0	40
	10	8.968 4742	2254	8.970 3604	2274	1.029 6396	9.998 1138	20	50	
	20	8.968 6996	2252	8.970 5878	2272	1.029 4122	9.998 1118	19	40	
	30	8.968 9248	2252	8.970 8150	2271	1.029 1850	9.998 1099	20	30	
	40	8.969 1500	2250	8.971 0421	2270	1.028 9579	9.998 1079	20	20	
	50	8.969 3750	2249	8.971 2691	2268	1.028 7309	9.998 1059	19	10	
21	0	8.969 5999	2247	8.971 4959	2268	1.028 5041	9.998 1040	20	0	39
	10	8.969 8246	2247	8.971 7227	2266	1.028 2773	9.998 1020	20	50	
	20	8.970 0493	2245	8.971 9493	2265	1.028 0507	9.998 1000	20	40	
	30	8.970 2738	2245	8.972 1758	2264	1.027 8242	9.998 0980	19	30	
	40	8.970 4983	2243	8.972 4022	2263	1.027 5978	9.998 0961	20	20	
	50	8.970 7226	2242	8.972 6285	2262	1.027 3715	9.998 0941	20	10	
22	0	8.970 9468	2240	8.972 8547	2260	1.027 1453	9.998 0921	20	0	38
	10	8.971 1708	2240	8.973 0807	2260	1.026 9193	9.998 0901	20	50	
	20	8.971 3948	2238	8.973 3067	2258	1.026 6933	9.998 0881	19	40	
	30	8.971 6186	2238	8.973 5325	2257	1.026 4675	9.998 0862	20	30	
	40	8.971 8424	2236	8.973 7582	2256	1.026 2418	9.998 0842	20	20	
	50	8.972 0660	2235	8.973 9838	2254	1.026 0162	9.998 0822	20	10	
23	0	8.972 2895	2233	8.974 2092	2254	1.025 7908	9.998 0802	20	0	37
	10	8.972 5128	2233	8.974 4346	2253	1.025 5654	9.998 0782	20	50	
	20	8.972 7361	2231	8.974 6599	2251	1.025 3401	9.998 0762	19	40	
	30	8.972 9592	2231	8.974 8850	2250	1.025 1150	9.998 0743	20	30	
	40	8.973 1823	2229	8.975 1100	2249	1.024 8900	9.998 0723	20	20	
	50	8.973 4052	2228	8.975 3349	2248	1.024 6651	9.998 0703	20	10	
24	0	8.973 6280	2227	8.975 5597	2247	1.024 4403	9.998 0683	20	0	36
	10	8.973 8507	2225	8.975 7844	2245	1.024 2156	9.998 0663	20	50	
	20	8.974 0732	2225	8.976 0089	2245	1.023 9911	9.998 0643	20	40	
	30	8.974 2957	2223	8.976 2334	2243	1.023 7666	9.998 0623	20	30	
	40	8.974 5180	2223	8.976 4577	2242	1.023 5423	9.998 0603	20	20	
	50	8.974 7403	2221	8.976 6819	2241	1.023 3181	9.998 0583	20	10	
25	0	8.974 9624	2220	8.976 9060	2240	1.023 0940	9.998 0563	20	0	35
	10	8.975 1844	2218	8.977 1300	2239	1.022 8700	9.998 0543	20	50	
	20	8.975 4062	2218	8.977 3539	2238	1.022 6461	9.998 0523	20	40	
	30	8.975 6280	2217	8.977 5777	2236	1.022 4223	9.998 0503	20	30	
	40	8.975 8497	2215	8.977 8013	2235	1.022 1987	9.998 0483	20	20	
	50	8.976 0712	2214	8.978 0248	2235	1.021 9752	9.998 0463	20	10	
26	0	8.976 2926	2213	8.978 2483	2233	1.021 7517	9.998 0443	20	0	34
	10	8.976 5139	2212	8.978 4716	2232	1.021 5284	9.998 0423	20	50	
	20	8.976 7351	2211	8.978 6948	2231	1.021 3052	9.998 0403	20	40	
	30	8.976 9562	2210	8.978 9179	2229	1.021 0821	9.998 0383	20	30	
	40	8.977 1772	2208	8.979 1408	2229	1.020 8592	9.998 0363	20	20	
	50	8.977 3980	2208	8.979 3637	2228	1.020 6363	9.998 0343	20	10	
27	0	8.977 6188	2206	8.979 5865	2226	1.020 4135	9.998 0323	20	0	33
	10	8.977 8394	2205	8.979 8091	2225	1.020 1909	9.998 0303	20	50	
	20	8.978 0599	2204	8.980 0316	2224	1.019 9684	9.998 0283	20	40	
	30	8.978 2803	2203	8.980 2540	2223	1.019 7460	9.998 0263	20	30	
	40	8.978 5006	2202	8.980 4763	2222	1.019 5237	9.998 0243	21	20	
	50	8.978 7208	2200	8.980 6985	2221	1.019 3015	9.998 0222	20	10	
28	0	8.978 9408	2200	8.980 9206	2220	1.019 0794	9.998 0202	20	0	32
	10	8.979 1608	2198	8.981 1426	2218	1.018 8574	9.998 0182	20	50	
	20	8.979 3806	2198	8.981 3644	2218	1.018 6356	9.998 0162	20	40	
	30	8.979 6004	2196	8.981 5862	2216	1.018 4138	9.998 0142	20	30	
	40	8.979 8200	2195	8.981 8078	2215	1.018 1922	9.998 0122	21	20	
	50	8.980 0395	2194	8.982 0293	2214	1.017 9707	9.998 0101	20	10	
29	0	8.980 2589	2192	8.982 2507	2213	1.017 7493	9.998 0081	20	0	31
	10	8.980 4781	2192	8.982 4720	2212	1.017 5280	9.998 0061	20	50	
	20	8.980 6973	2191	8.982 6932	2211	1.017 3068	9.998 0041	20	40	
	30	8.980 9164	2189	8.982 9143	2210	1.017 0857	9.998 0021	21	30	
	40	8.981 1353	2188	8.983 1353	2208	1.016 8647	9.998 0000	20	20	
	50	8.981 3541	2188	8.983 3561	2208	1.016 6439	9.997 9980	20	10	
30	0	8.981 5729		8.983 5769		1.016 4231	9.997 9960		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d	″	′

5°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	8.981 5729	2186	8.983 5769	2206	1.016 4231	9.997 9960	21	0	30
	10	8.981 7915	2185	8.983 7975	2206	1.016 2025	9.997 9939	20	50	
	20	8.982 0100	2184	8.984 0181	2204	1.015 9819	9.997 9919	20	40	
	30	8.982 2284	2182	8.984 2385	2203	1.015 7615	9.997 9899	20	30	
	40	8.982 4466	2182	8.984 4588	2202	1.015 5412	9.997 9879	21	20	
	50	8.982 6648	2181	8.984 6790	2201	1.015 3210	9.997 9858	20	10	
31	0	8.982 8829	2179	8.984 8991	2200	1.015 1009	9.997 9838	20	0	29
	10	8.983 1008	2179	8.985 1191	2198	1.014 8809	9.997 9818	21	50	
	20	8.983 3187	2177	8.985 3389	2198	1.014 6611	9.997 9797	20	40	
	30	8.983 5364	2176	8.985 5587	2196	1.014 4413	9.997 9777	20	30	
	40	8.983 7540	2175	8.985 7783	2196	1.014 2217	9.997 9757	21	20	
	50	8.983 9715	2174	8.985 9979	2194	1.014 0021	9.997 9736	20	10	
32	0	8.984 1889	2173	8.986 2173	2194	1.013 7827	9.997 9716	21	0	28
	10	8.984 4062	2172	8.986 4367	2192	1.013 5633	9.997 9695	20	50	
	20	8.984 6234	2170	8.986 6559	2191	1.013 3441	9.997 9675	20	40	
	30	8.984 8404	2170	8.986 8750	2190	1.013 1250	9.997 9655	21	30	
	40	8.985 0574	2168	8.987 0940	2189	1.012 9060	9.997 9634	20	20	
	50	8.985 2742	2168	8.987 3129	2188	1.012 6871	9.997 9614	21	10	
33	0	8.985 4910	2166	8.987 5317	2186	1.012 4683	9.997 9593	20	0	27
	10	8.985 7076	2165	8.987 7503	2186	1.012 2497	9.997 9573	21	50	
	20	8.985 9241	2164	8.987 9689	2185	1.012 0311	9.997 9552	20	40	
	30	8.986 1405	2163	8.988 1874	2183	1.011 8126	9.997 9532	21	30	
	40	8.986 3568	2162	8.988 4057	2183	1.011 5943	9.997 9511	20	20	
	50	8.986 5730	2161	8.988 6240	2181	1.011 3760	9.997 9491	21	10	
34	0	8.986 7891	2160	8.988 8421	2180	1.011 1579	9.997 9470	20	0	26
	10	8.987 0051	2159	8.989 0601	2179	1.010 9399	9.997 9450	21	50	
	20	8.987 2210	2157	8.989 2780	2179	1.010 7220	9.997 9429	20	40	
	30	8.987 4367	2157	8.989 4959	2177	1.010 5041	9.997 9409	21	30	
	40	8.987 6524	2155	8.989 7136	2176	1.010 2864	9.997 9388	20	20	
	50	8.987 8679	2155	8.989 9312	2175	1.010 0688	9.997 9368	21	10	
35	0	8.988 0834	2153	8.990 1487	2174	1.009 8513	9.997 9347	21	0	25
	10	8.988 2987	2152	8.990 3661	2172	1.009 6339	9.997 9326	20	50	
	20	8.988 5139	2151	8.990 5833	2172	1.009 4167	9.997 9306	21	40	
	30	8.988 7290	2150	8.990 8005	2171	1.009 1995	9.997 9285	20	30	
	40	8.988 9440	2149	8.991 0176	2169	1.008 9824	9.997 9265	21	20	
	50	8.989 1589	2148	8.991 2345	2169	1.008 7655	9.997 9244	21	10	
36	0	8.989 3737	2147	8.991 4514	2167	1.008 5486	9.997 9223	20	0	24
	10	8.989 5884	2146	8.991 6681	2167	1.008 3319	9.997 9203	21	50	
	20	8.989 8030	2144	8.991 8848	2165	1.008 1152	9.997 9182	21	40	
	30	8.990 0174	2144	8.992 1013	2165	1.007 8987	9.997 9161	20	30	
	40	8.990 2318	2143	8.992 3178	2163	1.007 6822	9.997 9141	21	20	
	50	8.990 4461	2141	8.992 5341	2162	1.007 4659	9.997 9120	21	10	
37	0	8.990 6602	2141	8.992 7503	2161	1.007 2497	9.997 9099	21	0	23
	10	8.990 8743	2139	8.992 9664	2160	1.007 0336	9.997 9078	20	50	
	20	8.991 0882	2138	8.993 1824	2159	1.006 8176	9.997 9058	21	40	
	30	8.991 3020	2138	8.993 3983	2158	1.006 6017	9.997 9037	21	30	
	40	8.991 5158	2136	8.993 6141	2157	1.006 3859	9.997 9016	20	20	
	50	8.991 7294	2135	8.993 8298	2156	1.006 1702	9.997 8996	21	10	
38	0	8.991 9429	2134	8.994 0454	2155	1.005 9546	9.997 8975	21	0	22
	10	8.992 1563	2133	8.994 2609	2154	1.005 7391	9.997 8954	21	50	
	20	8.992 3696	2132	8.994 4763	2152	1.005 5237	9.997 8933	21	40	
	30	8.992 5828	2131	8.994 6915	2152	1.005 3085	9.997 8912	20	30	
	40	8.992 7959	2130	8.994 9067	2151	1.005 0933	9.997 8892	21	20	
	50	8.993 0089	2128	8.995 1218	2149	1.004 8782	9.997 8871	21	10	
39	0	8.993 2217	2128	8.995 3367	2149	1.004 6633	9.997 8850	21	0	21
	10	8.993 4345	2127	8.995 5516	2147	1.004 4484	9.997 8829	21	50	
	20	8.993 6472	2125	8.995 7663	2147	1.004 2337	9.997 8808	21	40	
	30	8.993 8597	2125	8.995 9810	2145	1.004 0190	9.997 8787	20	30	
	40	8.994 0722	2123	8.996 1955	2145	1.003 8045	9.997 8767	21	20	
	50	8.994 2845	2123	8.996 4100	2143	1.003 5900	9.997 8746	21	10	
40	0	8.994 4968		8.996 6243		1.003 3757	9.997 8725		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

84°

	2190	2180	2170	2160	2150	2140	2130	2120
1	219	218	217	216	215	214	213	212
2	438	436	434	432	430	428	426	424
3	657	654	651	648	645	642	639	636
4	876	872	868	864	860	856	852	848
5	1095	1090	1085	1080	1075	1070	1065	1060
6	1314	1308	1302	1296	1290	1284	1278	1272
7	1533	1526	1519	1512	1505	1498	1491	1484
8	1752	1744	1736	1728	1720	1712	1704	1696
9	1971	1962	1953	1944	1935	1926	1917	1908

5°

	2140	2130	2120	2110	2100	2090	2080	2070
1	214	213	212	211	210	209	208	207
2	428	426	424	422	420	418	416	414
3	642	639	636	633	630	627	624	621
4	856	852	848	844	840	836	832	828
5	1070	1065	1060	1055	1050	1045	1040	1035
6	1284	1278	1272	1266	1260	1254	1248	1242
7	1498	1491	1484	1477	1470	1463	1456	1449
8	1712	1704	1696	1688	1680	1672	1664	1656
9	1926	1917	1908	1899	1890	1881	1872	1863

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	8.994 4968	2121	8.996 6243	2142	1.003 3757	9.997 8725	21	0	20
	10	8.994 7089	2121	8.996 8385	2142	1.003 1615	9.997 8704	21	50	
	20	8.994 9210	2119	8.997 0527	2140	1.002 9473	9.997 8683	21	40	
	30	8.995 1329	2118	8.997 2667	2139	1.002 7333	9.997 8662	21	30	
	40	8.995 3447	2118	8.997 4806	2138	1.002 5194	9.997 8641	21	20	
	50	8.995 5565	2116	8.997 6944	2137	1.002 3056	9.997 8620	21	10	
41	0	8.995 7681	2115	8.997 9081	2137	1.002 0919	9.997 8599	21	0	19
	10	8.995 9796	2114	8.998 1218	2135	1.001 8782	9.997 8578	21	50	
	20	8.996 1910	2113	8.998 3353	2134	1.001 6647	9.997 8557	21	40	
	30	8.996 4023	2112	8.998 5487	2133	1.001 4513	9.997 8536	21	30	
	40	8.996 6135	2111	8.998 7620	2132	1.001 2380	9.997 8515	21	20	
	50	8.996 8246	2110	8.998 9752	2131	1.001 0248	9.997 8494	21	10	
42	0	8.997 0356	2109	8.999 1883	2130	1.000 8117	9.997 8473	21	0	18
	10	8.997 2465	2108	8.999 4013	2129	1.000 5987	9.997 8452	21	50	
	20	8.997 4573	2107	8.999 6142	2128	1.000 3858	9.997 8431	21	40	
	30	8.997 6680	2106	8.999 8270	2127	1.000 1730	9.997 8410	21	30	
	40	8.997 8786	2105	9.000 0397	2125	0.999 9603	9.997 8389	21	20	
	50	8.998 0891	2103	9.000 2522	2125	0.999 7478	9.997 8368	21	10	
43	0	8.998 2994	2103	9.000 4647	2124	0.999 5353	9.997 8347	21	0	17
	10	8.998 5097	2102	9.000 6771	2123	0.999 3229	9.997 8326	21	50	
	20	8.998 7199	2101	9.000 8894	2122	0.999 1106	9.997 8305	21	40	
	30	8.998 9300	2099	9.001 1016	2120	0.998 8984	9.997 8284	21	30	
	40	8.999 1399	2099	9.001 3136	2120	0.998 6864	9.997 8263	21	20	
	50	8.999 3498	2097	9.001 5256	2119	0.998 4744	9.997 8242	22	10	
44	0	8.999 5595	2097	9.001 7375	2118	0.998 2625	9.997 8220	21	0	16
	10	8.999 7692	2096	9.001 9493	2117	0.998 0507	9.997 8199	21	50	
	20	8.999 9788	2094	9.002 1610	2115	0.997 8390	9.997 8178	21	40	
	30	9.000 1882	2094	9.002 3725	2115	0.997 6275	9.997 8157	21	30	
	40	9.000 3976	2092	9.002 5840	2114	0.997 4160	9.997 8136	21	20	
	50	9.000 6068	2092	9.002 7954	2112	0.997 2046	9.997 8115	22	10	
45	0	9.000 8160	2090	9.003 0066	2112	0.996 9934	9.997 8093	21	0	15
	10	9.001 0250	2090	9.003 2178	2111	0.996 7822	9.997 8072	21	50	
	20	9.001 2340	2088	9.003 4289	2109	0.996 5711	9.997 8051	21	40	
	30	9.001 4428	2088	9.003 6398	2109	0.996 3602	9.997 8030	21	30	
	40	9.001 6516	2086	9.003 8507	2108	0.996 1493	9.997 8009	22	20	
	50	9.001 8602	2085	9.004 0615	2106	0.995 9385	9.997 7987	21	10	
46	0	9.002 0687	2085	9.004 2721	2106	0.995 7279	9.997 7966	21	0	14
	10	9.002 2772	2083	9.004 4827	2105	0.995 5173	9.997 7945	22	50	
	20	9.002 4855	2083	9.004 6932	2103	0.995 3068	9.997 7923	21	40	
	30	9.002 6938	2081	9.004 9035	2103	0.995 0965	9.997 7902	21	30	
	40	9.002 9019	2080	9.005 1138	2102	0.994 8862	9.997 7881	21	20	
	50	9.003 1099	2080	9.005 3240	2100	0.994 6760	9.997 7860	22	10	
47	0	9.003 3179	2078	9.005 5340	2100	0.994 4660	9.997 7838	21	0	13
	10	9.003 5257	2077	9.005 7440	2099	0.994 2560	9.997 7817	21	50	
	20	9.003 7334	2077	9.005 9539	2098	0.994 0461	9.997 7796	22	40	
	30	9.003 9411	2075	9.006 1637	2096	0.993 8363	9.997 7774	21	30	
	40	9.004 1486	2074	9.006 3733	2096	0.993 6267	9.997 7753	22	20	
	50	9.004 3560	2074	9.006 5829	2095	0.993 4171	9.997 7731	21	10	
48	0	9.004 5634	2072	9.006 7924	2093	0.993 2076	9.997 7710	21	0	12
	10	9.004 7706	2072	9.007 0017	2093	0.992 9983	9.997 7689	22	50	
	20	9.004 9778	2070	9.007 2110	2092	0.992 7890	9.997 7667	21	40	
	30	9.005 1848	2069	9.007 4202	2091	0.992 5798	9.997 7646	22	30	
	40	9.005 3917	2069	9.007 6293	2090	0.992 3707	9.997 7624	21	20	
	50	9.005 5986	2067	9.007 8383	2088	0.992 1617	9.997 7603	21	10	
49	0	9.005 8053	2066	9.008 0471	2088	0.991 9529	9.997 7582	22	0	11
	10	9.006 0119	2066	9.008 2559	2087	0.991 7441	9.997 7560	21	50	
	20	9.006 2185	2064	9.008 4646	2086	0.991 5354	9.997 7539	22	40	
	30	9.006 4249	2063	9.008 6732	2085	0.991 3268	9.997 7517	21	30	
	40	9.006 6312	2063	9.008 8817	2084	0.991 1183	9.997 7496	22	20	
	50	9.006 8375	2061	9.009 0901	2083	0.990 9099	9.997 7474	21	10	
50	0	9.007 0436		9.009 2984		0.990 7016	9.997 7453		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

84°

5°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.007 0436	2061	9.009 2984	2081	0.990 7016	9.997 7453	22	0	10
	10	9.007 2497	2059	9.009 5065	2081	0.990 4935	9.997 7431	21	50	
	20	9.007 4556	2059	9.009 7146	2080	0.990 2854	9.997 7410	22	40	
	30	9.007 6615	2057	9.009 9226	2079	0.990 0774	9.997 7388	21	30	
	40	9.007 8672	2057	9.010 1305	2078	0.989 8695	9.997 7367	22	20	
	50	9.008 0729	2055	9.010 3383	2078	0.989 6617	9.997 7345	22	10	
51	0	9.008 2784	2055	9.010 5461	2076	0.989 4539	9.997 7323	21	0	9
	10	9.008 4839	2053	9.010 7537	2075	0.989 2463	9.997 7302	22	50	
	20	9.008 6892	2053	9.010 9612	2074	0.989 0388	9.997 7280	21	40	
	30	9.008 8945	2051	9.011 1686	2073	0.988 8314	9.997 7259	22	30	
	40	9.009 0996	2051	9.011 3759	2072	0.988 6241	9.997 7237	22	20	
	50	9.009 3047	2049	9.011 5831	2072	0.988 4169	9.997 7215	21	10	
52	0	9.009 5096	2049	9.011 7903	2070	0.988 2097	9.997 7194	22	0	8
	10	9.009 7145	2048	9.011 9973	2069	0.988 0027	9.997 7172	21	50	
	20	9.009 9193	2046	9.012 2042	2068	0.987 7958	9.997 7151	22	40	
	30	9.010 1239	2046	9.012 4110	2068	0.987 5890	9.997 7129	22	30	
	40	9.010 3285	2045	9.012 6178	2066	0.987 3822	9.997 7107	21	20	
	50	9.010 5330	2044	9.012 8244	2066	0.987 1756	9.997 7086	22	10	
53	0	9.010 7374	2042	9.013 0310	2064	0.986 9690	9.997 7064	22	0	7
	10	9.010 9416	2042	9.013 2374	2064	0.986 7626	9.997 7042	22	50	
	20	9.011 1458	2041	9.013 4438	2062	0.986 5562	9.997 7020	21	40	
	30	9.011 3499	2040	9.013 6500	2062	0.986 3500	9.997 6999	22	30	
	40	9.011 5539	2039	9.013 8562	2061	0.986 1438	9.997 6977	22	20	
	50	9.011 7578	2038	9.014 0623	2059	0.985 9377	9.997 6955	22	10	
54	0	9.011 9616	2037	9.014 2682	2059	0.985 7318	9.997 6933	21	0	6
	10	9.012 1653	2036	9.014 4741	2058	0.985 5259	9.997 6912	22	50	
	20	9.012 3689	2035	9.014 6799	2057	0.985 3201	9.997 6890	22	40	
	30	9.012 5724	2034	9.014 8856	2056	0.985 1144	9.997 6868	22	30	
	40	9.012 7758	2033	9.015 0912	2055	0.984 9088	9.997 6846	21	20	
	50	9.012 9791	2032	9.015 2967	2054	0.984 7033	9.997 6825	22	10	
55	0	9.013 1823	2032	9.015 5021	2053	0.984 4979	9.997 6803	22	0	5
	10	9.013 3855	2030	9.015 7074	2052	0.984 2926	9.997 6781	22	50	
	20	9.013 5885	2029	9.015 9126	2051	0.984 0874	9.997 6759	22	40	
	30	9.013 7914	2028	9.016 1177	2050	0.983 8823	9.997 6737	22	30	
	40	9.023 9942	2028	9.016 3227	2049	0.983 6773	9.997 6715	21	20	
	50	9.014 1970	2026	9.016 5276	2049	0.983 4724	9.997 6694	22	10	
56	0	9.014 3996	2026	9.016 7325	2047	0.983 2675	9.997 6672	22	0	4
	10	9.014 6022	2024	9.016 9372	2046	0.983 0628	9.997 6650	22	50	
	20	9.014 8046	2024	9.017 1418	2046	0.982 8582	9.997 6628	22	40	
	30	9.015 0070	2022	9.017 3464	2044	0.982 6536	9.997 6606	22	30	
	40	9.015 2092	2022	9.017 5508	2044	0.982 4492	9.997 6584	22	20	
	50	9.015 4114	2021	9.017 7552	2042	0.982 2448	9.997 6562	22	10	
57	0	9.015 6135	2019	9.017 9594	2042	0.982 0406	9.997 6540	22	0	3
	10	9.015 8154	2019	9.018 1636	2041	0.981 8364	9.997 6518	22	50	
	20	9.016 0173	2018	9.018 3677	2040	0.981 6323	9.997 6496	22	40	
	30	9.016 2191	2017	9.018 5717	2039	0.981 4283	9.997 6474	22	30	
	40	9.016 4208	2016	9.018 7756	2038	0.981 2244	9.997 6452	22	20	
	50	9.016 6224	2015	9.018 9794	2037	0.981 0206	9.997 6430	22	10	
58	0	9.016 8239	2014	9.019 1831	2036	0.980 8169	9.997 6408	22	0	2
	10	9.017 0253	2013	9.019 3867	2035	0.980 6133	9.997 6386	22	50	
	20	9.017 2266	2012	9.019 5902	2034	0.980 4098	9.997 6364	22	40	
	30	9.017 4278	2012	9.019 7936	2033	0.980 2064	9.997 6342	22	30	
	40	9.017 6290	2010	9.019 9969	2033	0.980 0031	9.997 6320	22	20	
	50	9.017 8300	2009	9.020 2002	2031	0.979 7998	9.997 6298	22	10	
59	0	9.018 0309	2009	9.020 4033	2031	0.979 5967	9.997 6276	22	0	1
	10	9.018 2318	2007	9.020 6064	2029	0.979 3936	9.997 6254	22	50	
	20	9.018 4325	2007	9.020 8093	2029	0.979 1907	9.997 6232	22	40	
	30	9.018 6332	2005	9.021 0122	2028	0.978 9878	9.997 6210	22	30	
	40	9.018 8337	2005	9.021 2150	2026	0.978 7850	9.997 6188	22	20	
	50	9.019 0342	2004	9.021 4176	2026	0.978 5824	9.997 6166	23	10	
60	0	9.019 2346		9.021 6202		0.978 3798	9.997 6143		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

84°

	2070	2060	2050	2040	2030	2020	2010	2000
1	207	206	205	204	203	202	201	200
2	414	412	410	408	406	404	402	400
3	621	618	615	612	609	606	603	600
4	828	824	820	816	812	808	804	800
5	1035	1030	1025	1020	1015	1010	1005	1000
6	1242	1236	1230	1224	1218	1212	1206	1200
7	1449	1442	1435	1428	1421	1414	1407	1400
8	1656	1648	1640	1632	1624	1616	1608	1600
9	1863	1854	1845	1836	1827	1818	1809	1800

6°

	2020	2010	2000	1990	1980	1970	1960	1950
1	202	201	200	199	198	197	196	195
2	404	402	400	398	396	394	392	390
3	606	603	600	597	594	591	588	585
4	808	804	800	796	792	788	784	780
5	1010	1005	1000	995	990	985	980	975
6	1212	1206	1200	1194	1188	1182	1176	1170
7	1414	1407	1400	1393	1386	1379	1372	1365
8	1616	1608	1600	1592	1584	1576	1568	1560
9	1818	1809	1800	1791	1782	1773	1764	1755

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.019 2346	2002	9.021 6202	2025	0.978 3798	9.997 6143	22	0	60
	10	9.019 4348	2002	9.021 8227	2024	0.978 1773	9.997 6121	22	50	
	20	9.019 6350	2001	9.022 0251	2023	0.977 9749	9.997 6099	22	40	
	30	9.019 8351	2000	9.022 2274	2022	0.977 7726	9.997 6077	22	30	
	40	9.020 0351	1999	9.022 4296	2022	0.977 5704	9.997 6055	22	20	
	50	9.020 2350	1998	9.022 6318	2020	0.977 3682	9.997 6033	22	10	
1	0	9.020 4348	1998	9.022 8338	2019	0.977 1662	9.997 6011	23	0	59
	10	9.020 6346	1996	9.023 0357	2019	0.976 9643	9.997 5988	22	50	
	20	9.020 8342	1995	9.023 2376	2017	0.976 7624	9.997 5966	22	40	
	30	9.021 0337	1995	9.023 4393	2017	0.976 5607	9.997 5944	22	30	
	40	9.021 2332	1993	9.023 6410	2016	0.976 3590	9.997 5922	23	20	
	50	9.021 4325	1993	9.023 8426	2015	0.976 1574	9.997 5899	22	10	
2	0	9.021 6318	1992	9.024 0441	2014	0.975 9559	9.997 5877	22	0	58
	10	9.021 8310	1990	9.024 2455	2013	0.975 7545	9.997 5855	22	50	
	20	9.022 0300	1990	9.024 4468	2012	0.975 5532	9.997 5833	23	40	
	30	9.022 2290	1989	9.024 6480	2011	0.975 3520	9.997 5810	22	30	
	40	9.022 4279	1988	9.024 8491	2010	0.975 1509	9.997 5788	22	20	
	50	9.022 6267	1987	9.025 0501	2009	0.974 9499	9.997 5766	23	10	
3	0	9.022 8254	1986	9.025 2510	2009	0.974 7490	9.997 5743	22	0	57
	10	9.023 0240	1985	9.025 4519	2007	0.974 5481	9.997 5721	22	50	
	20	9.023 2225	1985	9.025 6526	2007	0.974 3474	9.997 5699	23	40	
	30	9.023 4210	1983	9.025 8533	2006	0.974 1467	9.997 5676	22	30	
	40	9.023 6193	1982	9.026 0539	2005	0.973 9461	9.997 5654	22	20	
	50	9.023 8175	1982	9.026 2544	2004	0.973 7456	9.997 5632	23	10	
4	0	9.024 0157	1981	9.026 4548	2003	0.973 5452	9.997 5609	22	0	56
	10	9.024 2138	1979	9.026 6551	2002	0.973 3449	9.997 5587	22	50	
	20	9.024 4117	1979	9.026 8553	2001	0.973 1447	9.997 5565	23	40	
	30	9.024 6096	1978	9.027 0554	2000	0.972 9446	9.997 5542	22	30	
	40	9.024 8074	1977	9.027 2554	2000	0.972 7446	9.997 5520	23	20	
	50	9.025 0051	1976	9.027 4554	1998	0.972 5446	9.997 5497	22	10	
5	0	9.025 2027	1975	9.027 6552	1998	0.972 3448	9.997 5475	22	0	55
	10	9.025 4002	1975	9.027 8550	1996	0.972 1450	9.997 5453	23	50	
	20	9.025 5977	1973	9.028 0546	1996	0.971 9454	9.997 5430	22	40	
	30	9.025 7950	1972	9.028 2542	1995	0.971 7458	9.997 5408	23	30	
	40	9.025 9922	1972	9.028 4537	1994	0.971 5463	9.997 5385	22	20	
	50	9.026 1894	1971	9.028 6531	1993	0.971 3469	9.997 5363	23	10	
6	0	9.026 3865	1969	9.028 8524	1993	0.971 1476	9.997 5340	22	0	54
	10	9.026 5834	1969	9.029 0517	1991	0.970 9483	9.997 5318	23	50	
	20	9.026 7803	1968	9.029 2508	1990	0.970 7492	9.997 5295	22	40	
	30	9.026 9771	1967	9.029 4498	1990	0.970 5502	9.997 5273	23	30	
	40	9.027 1738	1966	9.029 6488	1989	0.970 3512	9.997 5250	23	20	
	50	9.027 3704	1965	9.029 8477	1987	0.970 1523	9.997 5227	22	10	
7	0	9.027 5669	1965	9.030 0464	1987	0.969 9536	9.997 5205	23	0	53
	10	9.027 7634	1963	9.030 2451	1986	0.969 7549	9.997 5182	22	50	
	20	9.027 9597	1963	9.030 4437	1985	0.969 5563	9.997 5160	23	40	
	30	9.028 1560	1961	9.030 6422	1985	0.969 3578	9.997 5137	22	30	
	40	9.028 3521	1961	9.030 8407	1983	0.969 1593	9.997 5115	23	20	
	50	9.028 5482	1960	9.031 0390	1983	0.968 9610	9.997 5092	23	10	
8	0	9.028 7442	1959	9.031 2373	1981	0.968 7627	9.997 5069	22	0	52
	10	9.028 9401	1958	9.031 4354	1981	0.968 5646	9.997 5047	23	50	
	20	9.029 1359	1957	9.031 6335	1980	0.968 3665	9.997 5024	23	40	
	30	9.029 3316	1956	9.031 8315	1979	0.968 1685	9.997 5001	22	30	
	40	9.029 5272	1956	9.032 0294	1978	0.967 9706	9.997 4979	23	20	
	50	9.029 7228	1954	9.032 2272	1977	0.967 7728	9.997 4956	23	10	
9	0	9.029 9182	1954	9.032 4249	1976	0.967 5751	9.997 4933	22	0	51
	10	9.030 1136	1952	9.032 6225	1975	0.967 3775	9.997 4911	23	50	
	20	9.030 3088	1952	9.032 8200	1975	0.967 1800	9.997 4888	23	40	
	30	9.030 5040	1951	9.033 0175	1974	0.966 9825	9.997 4865	22	30	
	40	9.030 6991	1950	9.033 2149	1972	0.966 7851	9.997 4843	23	20	
	50	9.030 8941	1949	9.033 4121	1972	0.966 5879	9.997 4820	23	10	
10	0	9.031 0890		9.033 6093		0.966 3907	9.997 4797		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

83°

6°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.031 0890	1949	9.033 6093	1971	0.966 3907	9.997 4797	23	0	50
	10	9.031 2839	1947	9.033 8064	1971	0.966 1936	9.997 4774	22	50	
	20	9.031 4786	1947	9.034 0035	1969	0.965 9965	9.997 4752	23	40	
	30	9.031 6733	1945	9.034 2004	1968	0.965 7996	9.997 4729	23	30	
	40	9.031 8678	1945	9.034 3972	1968	0.965 6028	9.997 4706	23	20	
	50	9.032 0623	1944	9.034 5940	1966	0.965 4060	9.997 4683	23	10	
11	0	9.032 2567	1943	9.034 7906	1966	0.965 2094	9.997 4660	22	0	49
	10	9.032 4510	1942	9.034 9872	1965	0.965 0128	9.997 4638	23	50	
	20	9.032 6452	1941	9.035 1837	1954	0.964 8163	9.997 4615	23	40	
	30	9.032 8393	1941	9.035 3801	1963	0.964 6199	9.997 4592	23	30	
	40	9.033 0334	1939	9.035 5764	1963	0.964 4236	9.997 4569	23	20	
	50	9.033 2273	1939	9.035 7727	1961	0.964 2273	9.997 4546	23	10	
12	0	9.033 4212	1937	9.035 9688	1961	0.964 0312	9.997 4523	22	0	48
	10	9.033 6149	1937	9.036 1649	1960	0.963 8351	9.997 4501	23	50	
	20	9.033 8086	1936	9.036 3609	1958	0.963 6391	9.997 4478	23	40	
	30	9.034 0022	1935	9.036 5567	1959	0.963 4433	9.997 4455	23	30	
	40	9.034 1957	1935	9.036 7526	1957	0.963 2474	9.997 4432	23	20	
	50	9.034 3892	1933	9.036 9483	1956	0.963 0517	9.997 4409	23	10	
13	0	9.034 5825	1932	9.037 1439	1955	0.962 8561	9.997 4386	23	0	47
	10	9.034 7757	1932	9.037 3394	1955	0.962 6606	9.997 4363	23	50	
	20	9.034 9689	1931	9.037 5349	1954	0.962 4651	9.997 4340	23	40	
	30	9.035 1620	1930	9.037 7303	1953	0.962 2697	9.997 4317	23	30	
	40	9.035 3550	1929	9.037 9256	1952	0.962 0744	9.997 4294	23	20	
	50	9.035 5479	1928	9.038 1208	1951	0.961 8792	9.997 4271	23	10	
14	0	9.035 7407	1927	9.038 3159	1950	0.961 6841	9.997 4248	23	0	46
	10	9.035 9334	1927	9.038 5109	1949	0.961 4891	9.997 4225	23	50	
	20	9.036 1261	1925	9.038 7058	1949	0.961 2942	9.997 4202	23	40	
	30	9.036 3186	1925	9.038 9007	1948	0.961 0993	9.997 4179	23	30	
	40	9.036 5111	1924	9.039 0955	1947	0.960 9045	9.997 4156	23	20	
	50	9.036 7035	1923	9.039 2902	1946	0.960 7098	9.997 4133	23	10	
15	0	9.036 8958	1922	9.039 4848	1945	0.960 5152	9.997 4110	23	0	45
	10	9.037 0880	1921	9.039 6793	1944	0.960 3207	9.997 4087	23	50	
	20	9.037 2801	1920	9.039 8737	1944	0.960 1263	9.997 4064	23	40	
	30	9.037 4721	1920	9.040 0681	1942	0.959 9319	9.997 4041	23	30	
	40	9.037 6641	1918	9.040 2623	1942	0.959 7377	9.997 4018	23	20	
	50	9.037 8559	1918	9.040 4565	1941	0.959 5435	9.997 3995	24	10	
16	0	9.038 0477	1917	9.040 6506	1940	0 959 3494	9.997 3971	23	0	44
	10	9.038 2394	1916	9.040 8446	1939	0.959 1554	9.997 3948	23	50	
	20	9.038 4310	1916	9.041 0385	1939	0.958 9615	9.997 3925	23	40	
	30	9.038 6226	1914	9.041 2324	1937	0.958 7676	9.997 3902	23	30	
	40	9.038 8140	1914	9.041 4261	1937	0.958 5739	9.997 3879	23	20	
	50	9.039 0054	1912	9.041 6198	1936	0.958 3802	9.997 3856	23	10	
17	0	9.039 1966	1912	9.041 8134	1935	0.958 1866	9.997 3833	24	0	43
	10	9.039 3878	1911	9.042 0069	1934	0.957 9931	9.997 3809	23	50	
	20	9.039 5789	1910	9.042 2003	1933	0.957 7997	9.997 3786	23	40	
	30	9.039 7699	1909	9.042 3936	1933	0.957 6064	9.997 3763	23	30	
	40	9.039 9608	1909	9.042 5869	1931	0.957 4131	9.997 3740	24	20	
	50	9.040 1517	1907	9.042 7800	1931	0.957 2200	9.997 3716	23	10	
18	0	9.040 3424	1907	9.042 9731	1930	0.957 0269	9.997 3693	23	0	42
	10	9.040 5331	1906	9.043 1661	1929	0.956 8339	9.997 3670	23	50	
	20	9.040 7237	1905	9.043 3590	1929	0.956 6410	9.997 3647	24	40	
	30	9.040 9142	1904	9.043 5519	1927	0.956 4481	9.997 3623	23	30	
	40	9.041 1046	1904	9.043 7446	1927	0.956 2554	9.997 3600	23	20	
	50	9.041 2950	1902	9.043 9373	1926	0.956 0627	9.997 3577	23	10	
19	0	9.041 4852	1902	9.044 1299	1924	0.955 8701	9.997 3554	24	0	41
	10	9.041 6754	1901	9.044 3223	1925	0.955 6777	9.997 3530	23	50	
	20	9.041 8655	1900	9.044 5148	1923	0.955 4852	9.997 3507	23	40	
	30	9.042 0555	1899	9.044 7071	1922	0.955 2929	9.997 3484	24	30	
	40	9.042 2454	1898	9.044 8993	1922	0.955 1007	9.997 3460	23	20	
	50	9.042 4352	1897	9.045 0915	1921	0.954 9085	9.997 3437	23	10	
20	0	9.042 6249		9.045 2836		0.954 7164	9.997 3414		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

83°

	1960	1950	1940	1930	1920	1910	1900	1890
1	196	195	194	193	192	191	190	189
2	392	390	388	386	384	382	380	378
3	588	585	582	579	576	573	570	567
4	784	780	776	772	768	764	760	756
5	980	975	970	965	960	955	950	945
6	1176	1170	1164	1158	1152	1146	1140	1134
7	1372	1365	1358	1351	1344	1337	1330	1323
8	1568	1560	1552	1544	1536	1528	1520	1512
9	1764	1755	1746	1737	1728	1719	1710	1701

6°

	1920	1910	1900	1890	1880	1870	1860	1850
1	192	191	190	189	188	187	186	185
2	384	382	380	378	376	374	372	370
3	576	573	570	567	564	561	558	555
4	768	764	760	756	752	748	744	740
5	960	955	950	945	940	935	930	925
6	1152	1146	1140	1134	1128	1122	1116	1110
7	1344	1337	1330	1323	1316	1309	1302	1295
8	1536	1528	1520	1512	1504	1496	1488	1480
9	1728	1719	1710	1701	1692	1683	1674	1665

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.042 6249	1897	9.045 2836	1920	0.954 7164	9.997 3414	24	0	40
	10	9.042 8146	1896	9.045 4756	1919	0.954 5244	9.997 3390	23	50	
	20	9.043 0042	1895	9.045 6675	1918	0.954 3325	9.997 3367	24	40	
	30	9.043 1937	1894	9.045 8593	1918	0.954 1407	9.997 3343	23	30	
	40	9.043 3831	1893	9.046 0511	1917	0.953 9489	9.997 3320	23	20	
	50	9.043 5724	1893	9.046 2428	1915	0.953 7572	9.997 3297	24	10	
21	0	9.043 7617	1891	9.046 4343	1915	0.953 5657	9.997 3273	23	0	39
	10	9.043 9508	1891	9.046 6258	1915	0.953 3742	9.997 3250	24	50	
	20	9.044 1399	1890	9.046 8173	1913	0.953 1827	9.997 3226	23	40	
	30	9.044 3289	1889	9.047 0086	1913	0.952 9914	9.997 3203	24	30	
	40	9.044 5178	1888	9.047 1999	1911	0.952 8001	9.997 3179	23	20	
	50	9.044 7066	1888	9.047 3910	1911	0.952 6090	9.997 3156	24	10	
22	0	9.044 8954	1886	9.047 5821	1910	0.952 4179	9.997 3132	23	0	38
	10	9.045 0840	1886	9.047 7731	1910	0.952 2269	9.997 3109	24	50	
	20	9.045 2726	1885	9.047 9641	1908	0.952 0359	9.997 3085	23	40	
	30	9.045 4611	1884	9.048 1549	1908	0.951 8451	9.997 3062	24	30	
	40	9.045 6495	1883	9.048 3457	1907	0.951 6543	9.997 3038	23	20	
	50	9.045 8378	1883	9.048 5364	1906	0.951 4636	9.997 3015	24	10	
23	0	9.046 0261	1882	9.048 7270	1905	0.951 2730	9.997 2991	23	0	37
	10	9.046 2143	1880	9.048 9175	1904	0.951 0825	9.997 2968	24	50	
	20	9.046 4023	1880	9.049 1079	1904	0.950 8921	9.997 2944	23	40	
	30	9.046 5903	1880	9.049 2983	1903	0.950 7017	9.997 2921	24	30	
	40	9.046 7783	1878	9.049 4886	1902	0.950 5114	9.997 2897	24	20	
	50	9.046 9661	1877	9.049 6788	1901	0.950 3212	9.997 2873	23	10	
24	0	9.047 1538	1877	9.049 8689	1900	0.950 1311	9.997 2850	24	0	36
	10	9.047 3415	1876	9.050 0589	1900	0.949 9411	9.997 2826	24	50	
	20	9.047 5291	1875	9.050 2489	1898	0.949 7511	9.997 2802	23	40	
	30	9.047 7166	1874	9.050 4387	1898	0.949 5613	9.997 2779	24	30	
	40	9.047 9040	1874	9.050 6285	1897	0.949 3715	9.997 2755	23	20	
	50	9.048 0914	1872	9.050 8182	1896	0.949 1818	9.997 2732	24	10	
25	0	9.048 2786	1872	9.051 0078	1896	0.948 9922	9.997 2708	24	0	35
	10	9.048 4658	1871	9.051 1974	1895	0.948 8026	9.997 2684	24	50	
	20	9.048 6529	1870	9.051 3869	1893	0.948 6131	9.997 2660	23	40	
	30	9.048 8399	1870	9.051 5762	1894	0.948 4238	9.997 2637	24	30	
	40	9.049 0269	1868	9.051 7656	1892	0.948 2344	9.997 2613	24	20	
	50	9.049 2137	1868	9.051 9548	1891	0.948 0452	9.997 2589	23	10	
26	0	9.049 4005	1867	9.052 1439	1891	0.947 8561	9.997 2566	24	0	34
	10	9.049 5872	1866	9.052 3330	1890	0.947 6670	9.997 2542	24	50	
	20	9.049 7738	1865.	9.052 5220	1889	0.947 4780	9.997 2518	24	40	
	30	9.049 9603	1865	9.052 7109	1888	0.947 2891	9.997 2494	23	30	
	40	9.050 1468	1863	9.052 8997	1887	0.947 1003	9.997 2471	24	20	
	50	9.050 3331	1863	9.053 0884	1887	0.946 9116	9.997 2447	24	10	
27	0	9.050 5194	1862	9.053 2771	1886	0.946 7229	9.997 2423	24	0	33
	10	9.050 7056	1861	9.053 4657	1885	0.946 5343	9.997 2399	24	50	
	20	9.050 8917	1861	9.053 6542	1884	0.946 3458	9.997 2375	24	40	
	30	9.051 0778	1859	9.053 8426	1884	0.946 1574	9.997 2351	23	30	
	40	9.051 2637	1859	9.054 0310	1882	0.945 9690	9.997 2328	24	20	
	50	9.051 4496	1858	9.054 2192	1882	0.945 7808	9.997 2304	24	10	
28	0	9.051 6354	1857	9.054 4074	1881	0.945 5926	9.997 2280	24	0	32
	10	9.051 8211	1857	9.054 5955	1881	0.945 4045	9.997 2256	24	50	
	20	9.052 0068	1855	9.054 7836	1879	0.945 2164	9.997 2232	24	40	
	30	9.052 1923	1855	9.054 9715	1879	0.945 0285	9.997 2208	24	30	
	40	9.052 3778	1854	9.055 1594	1878	0.944 8406	9.997 2184	24	20	
	50	9.052 5632	1853	9.055 3472	1877	0.944 6528	9.997 2160	23	10	
29	0	9.052 7485	1853	9.055 5349	1876	0.944 4651	9.997 2137	24	0	31
	10	9.052 9338	1851	9.055 7225	1876	0.944 2775	9.997 2113	24	50	
	20	9.053 1189	1851	9.055 9101	1874	0.944 0899	9.997 2089	24	40	
	30	9.053 3040	1850	9.056 0975	1874	0.943 9025	9.997 2065	24	30	
	40	9.053 4890	1849	9.056 2849	1873	0.943 7151	9.997 2041	24	20	
	50	9.053 6739	1849	9.056 4722	1873	0.943 5278	9.997 2017	24	10	
30	0	9.053 8588		9.056 6595		0.943 3405	9.997 1993		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

6°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.053 8588	1847	9.056 6595	1871	0.943 3405	9.997 1993	24	0	30
	10	9.054 0435	1847	9.056 8466	1871	0.943 1534	9.997 1969	24	50	
	20	9.054 2282	1846	9.057 0337	1870	0.942 9663	9.997 1945	24	40	
	30	9.054 4128	1845	9.057 2207	1869	0.942 7793	9.997 1921	24	30	
	40	9.054 5973	1845	9.057 4076	1869	0.942 5924	9.997 1897	24	20	
	50	9.054 7818	1843	9.057 5945	1868	0.942 4055	9.997 1873	24	10	
31	0	9.054 9661	1843	9.057 7813	1866	0.942 2187	9.997 1849	24	0	29
	10	9.055 1504	1842	9.057 9679	1866	0.942 0321	9.997 1825	24	50	
	20	9.055 3346	1841	9.058 1545	1866	0.941 8455	9.997 1801	25	40	
	30	9.055 5187	1841	9.058 3411	1864	0.941 6589	9.997 1776	24	30	
	40	9.055 7028	1839	9.058 5275	1864	0.941 4725	9.997 1752	24	20	
	50	9.055 8867	1839	9.058 7139	1863	0.941 2861	9.997 1728	24	10	
32	0	9.056 0706	1838	9.058 9002	1862	0.941 0998	9.997 1704	24	0	28
	10	9.056 2544	1838	9.059 0864	1862	0.940 9136	9.997 1680	24	50	
	20	9.056 4382	1836	9.059 2726	1860	0.940 7274	9.997 1656	24	40	
	30	9.056 6218	1836	9.059 4586	1860	0.940 5414	9.997 1632	24	30	
	40	9.056 8054	1835	9.059 6446	1859	0.940 3554	9.997 1608	25	20	
	50	9.056 9889	1834	9.059 8305	1859	0.940 1695	9.997 1583	24	10	
33	0	9.057 1723	1833	9.060 0164	1857	0.939 9836	9.997 1559	24	0	27
	10	9.057 3556	1833	9.060 2021	1857	0.939 7979	9.997 1535	24	50	
	20	9.057 5389	1832	9.060 3878	1856	0.939 6122	9.997 1511	24	40	
	30	9.057 7221	1831	9.060 5734	1855	0.939 4266	9.997 1487	24	30	
	40	9.057 9052	1830	9.060 7589	1855	0.939 2411	9.997 1463	25	20	
	50	9.058 0882	1829	9.060 9444	1853	0.939 0556	9.997 1438	24	10	
34	0	9.058 2711	1829	9.061 1297	1853	0.938 8703	9.997 1414	24	0	26
	10	9.058 4540	1828	9.061 3150	1852	0.938 6850	9.997 1390	24	50	
	20	9.058 6368	1827	9.061 5002	1852	0.938 4998	9.997 1366	25	40	
	30	9.058 8195	1827	9.061 6854	1850	0.938 3146	9.997 1341	24	30	
	40	9.059 0022	1825	9.061 8704	1850	0.938 1296	9.997 1317	24	20	
	50	9.059 1847	1825	9.062 0554	1849	0.937 9446	9.997 1293	25	10	
35	0	9.059 3672	1824	9.062 2403	1849	0.937 7597	9.997 1268	24	0	25
	10	9.059 5496	1823	9.062 4252	1847	0.937 5748	9.997 1244	24	50	
	20	9.059 7319	1823	9.062 6099	1847	0.937 3901	9.997 1220	24	40	
	30	9.059 9142	1821	9.062 7946	1846	0.937 2054	9.997 1196	25	30	
	40	9.060 0963	1821	9.062 9792	1845	0.937 0208	9.997 1171	24	20	
	50	9.060 2784	1820	9.063 1637	1845	0.936 8363	9.997 1147	25	10	
36	0	9.060 4604	1820	9.063 3482	1843	0.936 6518	9.997 1122	24	0	24
	10	9.060 6424	1818	9.063 5325	1843	0.936 4675	9.997 1098	24	50	
	20	9.060 8242	1818	9.063 7168	1843	0.936 2832	9.997 1074	25	40	
	30	9.061 0060	1817	9.063 9011	1841	0.936 0989	9.997 1049	24	30	
	40	9.061 1877	1816	9.064 0852	1841	0.935 9148	9.997 1025	24	20	
	50	9.061 3693	1816	9.064 2693	1840	0.935 7307	9.997 1001	25	10	
37	0	9.061 5509	1815	9.064 4533	1839	0.935 5467	9.997 0976	24	0	23
	10	9.061 7324	1814	9.064 6372	1838	0.935 3628	9.997 0952	25	50	
	20	9.061 9138	1813	9.064 8210	1838	0.935 1790	9.997 0927	24	40	
	30	9.062 0951	1812	9.065 0048	1837	0.934 9952	9.997 0903	25	30	
	40	9.062 2763	1812	9.065 1885	1836	0.934 8115	9.997 0878	24	20	
	50	9.062 4575	1811	9.065 3721	1835	0.934 6279	9.997 0854	25	10	
38	0	9.062 6386	1810	9.065 5556	1835	0.934 4444	9.997 0829	24	0	22
	10	9.062 8196	1809	9.065 7391	1834	0.934 2609	9.997 0805	25	50	
	20	9.063 0005	1809	9.065 9225	1833	0.934 0775	9.997 0780	24	40	
	30	9.063 1814	1808	9.066 1058	1832	0.933 8942	9.997 0756	25	30	
	40	9.063 3622	1807	9.066 2890	1832	0.933 7110	9.997 0731	24	20	
	50	9.063 5429	1806	9.066 4722	1831	0.933 5278	9.997 0707	25	10	
39	0	9.063 7235	1806	9.066 6553	1830	0.933 3447	9.997 0682	24	0	21
	10	9.063 9041	1805	9.066 8383	1829	0.933 1617	9.997 0658	25	50	
	20	9.064 0846	1804	9.067 0212	1829	0.932 9788	9.997 0633	24	40	
	30	9.064 2650	1803	9.067 2041	1828	0.932 7959	9.997 0609	25	30	
	40	9.064 4453	1802	9.067 3869	1827	0.932 6131	9.997 0584	25	20	
	50	9.064 6255	1802	9.067 5696	1826	0.932 4304	9.997 0559	24	10	
40	0	9.064 8057		9.067 7522		0.932 2478	9.997 0535		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

83°

1870	
1	187
2	374
3	561
4	748
5	935
6	1122
7	1309
8	1496
9	1683

1860	
1	186
2	372
3	558
4	744
5	930
6	1116
7	1302
8	1488
9	1674

1850	
1	185
2	370
3	555
4	740
5	925
6	1110
7	1295
8	1480
9	1665

1840	
1	184
2	368
3	552
4	736
5	920
6	1104
7	1288
8	1472
9	1656

1830	
1	183
2	366
3	549
4	732
5	915
6	1098
7	1281
8	1464
9	1647

1820	
1	182
2	364
3	546
4	728
5	910
6	1092
7	1274
8	1456
9	1638

1810	
1	181
2	362
3	543
4	724
5	905
6	1086
7	1267
8	1448
9	1629

1800	
1	180
2	360
3	540
4	720
5	900
6	1080
7	1260
8	1440
9	1620

6°

	1830	1820	1810	1800	1790	1780	1770	1760
1	183	182	181	180	179	178	177	176
2	366	364	362	360	358	356	354	352
3	549	546	543	540	537	534	531	528
4	732	728	724	720	716	712	708	704
5	915	910	905	900	895	890	885	880
6	1098	1092	1086	1080	1074	1068	1062	1056
7	1281	1274	1267	1260	1253	1246	1239	1232
8	1464	1456	1448	1440	1432	1424	1416	1408
9	1647	1638	1629	1620	1611	1602	1593	1584

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.064 8057	1801	9.067 7522	1826	0.932 2478	9.997 0535	25	0	20
	10	9.064 9858	1800	9.067 9348	1825	0.932 0652	9.997 0510	24	50	
	20	9.065 1658	1800	9.068 1173	1824	0.931 8827	9.997 0486	25	40	
	30	9.065 3458	1799	9.068 2997	1823	0.931 7003	9.997 0461	25	30	
	40	9.065 5257	1798	9.068 4820	1823	0.931 5180	9.997 0436	24	20	
	50	9.065 7055	1797	9.068 6643	1822	0.931 3357	9.997 0412	25	10	
41	0	9.065 8852	1796	9.068 8465	1821	0.931 1535	9.997 0387	25	0	19
	10	9.066 0648	1796	9.069 0286	1820	0.930 9714	9.997 0362	24	50	
	20	9.066 2444	1795	9.069 2106	1820	0.930 7894	9.997 0338	25	40	
	30	9.066 4239	1794	9.069 3926	1819	0.930 6074	9.997 0313	25	30	
	40	9.066 6033	1794	9.069 5745	1818	0.930 4255	9.997 0288	25	20	
	50	9.066 7827	1792	9.069 7563	1818	0.930 2437	9.997 0263	24	10	
42	0	9.066 9619	1792	9.069 9381	1816	0.930 0619	9.997 0239	25	0	18
	10	9.067 1411	1792	9.070 1197	1816	0.929 8803	9.997 0214	25	50	
	20	9.067 3203	1790	9.070 3013	1816	0.929 6987	9.997 0189	24	40	
	30	9.067 4993	1790	9.070 4829	1814	0.929 5171	9.997 0165	25	30	
	40	9.067 6783	1789	9.070 6643	1814	0.929 3357	9.997 0140	25	20	
	50	9.067 8572	1788	9.070 8457	1813	0.929 1543	9.997 0115	25	10	
43	0	9.068 0360	1787	9.071 0270	1812	0.928 9730	9.997 0090	25	0	17
	10	9.068 2147	1787	9.071 2082	1812	0.928 7918	9.997 0065	24	50	
	20	9.068 3934	1786	9.071 3894	1810	0.928 6106	9.997 0041	25	40	
	30	9.068 5720	1785	9.071 5704	1811	0.928 4296	9.997 0016	25	30	
	40	9.068 7505	1785	9.071 7515	1809	0.928 2485	9.996 9991	25	20	
	50	9.068 9290	1784	9.071 9324	1809	0.928 0676	9.996 9966	25	10	
44	0	9.069 1074	1783	9.072 1133	1807	0.927 8867	9.996 9941	25	0	16
	10	9.069 2857	1782	9.072 2940	1808	0.927 7060	9.996 9916	25	50	
	20	9.069 4639	1782	9.072 4748	1806	0.927 5252	9.996 9891	24	40	
	30	9.069 6421	1780	9.072 6554	1806	0.927 3446	9.996 9867	25	30	
	40	9.069 8201	1780	9.072 8360	1805	0.927 1640	9.996 9842	25	20	
	50	9.069 9981	1780	9.073 0165	1804	0.926 9835	9.996 9817	25	10	
45	0	9.070 1761	1778	9.073 1969	1803	0.926 8031	9.996 9792	25	0	15
	10	9.070 3539	1778	9.073 3772	1803	0.926 6228	9.996 9767	25	50	
	20	9.070 5317	1777	9.073 5575	1802	0.926 4425	9.996 9742	25	40	
	30	9.070 7094	1777	9.073 7377	1801	0.926 2623	9.996 9717	25	30	
	40	9.070 8871	1775	9.073 9178	1801	0.926 0822	9.996 9692	25	20	
	50	9.071 0646	1775	9.074 0979	1800	0.925 9021	9.996 9667	25	10	
46	0	9.071 2421	1774	9.074 2779	1799	0.925 7221	9.996 9642	25	0	14
	10	9.071 4195	1774	9.074 4578	1798	0.925 5422	9.996 9617	25	50	
	20	9.071 5969	1772	9.074 6376	1798	0.925 3624	9.996 9592	25	40	
	30	9.071 7741	1772	9.074 8174	1797	0.925 1826	9.996 9567	25	30	
	40	9.071 9513	1772	9.074 9971	1796	0.925 0029	9.996 9542	25	20	
	50	9.072 1285	1770	9.075 1767	1796	0.924 8233	9.996 9517	25	10	
47	0	9.072 3055	1770	9.075 3563	1795	0.924 6437	9.996 9492	25	0	13
	10	9.072 4825	1769	9.075 5358	1794	0.924 4642	9.996 9467	25	50	
	20	9.072 6594	1768	9.075 7152	1793	0.924 2848	9.996 9442	25	40	
	30	9.072 8362	1768	9.075 8945	1793	0.924 1055	9.996 9417	25	30	
	40	9.073 0130	1766	9.076 0738	1792	0.923 9262	9.996 9392	25	20	
	50	9.073 1896	1767	9.076 2530	1791	0.923 7470	9.996 9367	25	10	
48	0	9.073 3663	1765	9.076 4321	1790	0.923 5679	9.996 9342	25	0	12
	10	9.073 5428	1765	9.076 6111	1790	0.923 3889	9.996 9317	26	50	
	20	9.073 7193	1764	9.076 7901	1789	0.923 2099	9.996 9291	25	40	
	30	9.073 8957	1763	9.076 9690	1789	0.923 0310	9.996 9266	25	30	
	40	9.074 0720	1762	9.077 1479	1787	0.922 8521	9.996 9241	25	20	
	50	9.074 2482	1762	9.077 3266	1787	0.922 6734	9.996 9216	25	10	
49	0	9.074 4244	1761	9.077 5053	1786	0.922 4947	9.996 9191	25	0	11
	10	9.074 6005	1760	9.077 6839	1786	0.922 3161	9.996 9166	26	50	
	20	9.074 7765	1760	9.077 8625	1785	0.922 1375	9.996 9140	25	40	
	30	9.074 9525	1759	9.078 0410	1784	0.921 9590	9.996 9115	25	30	
	40	9.075 1284	1758	9.078 2194	1783	0.921 7806	9.996 9090	25	20	
	50	9.075 3042	1757	9.078 3977	1783	0.921 6023	9.996 9065	25	10	
50	0	9.075 4799		9.078 5760		0.921 4240	9.996 9040		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

83°

6°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.075 4799	1757	9.078 5760	1782	0.921 4240	9.996 9040	26	0	10
	10	9.075 6556	1756	9.078 7542	1781	0.921 2458	9.996 9014	25	50	
	20	9.075 8312	1755	9.078 9323	1780	0.921 0677	9.996 8989	25	40	
	30	9.076 0067	1755	9.079 1103	1780	0.920 8897	9.996 8964	25	30	
	40	9.076 1822	1753	9.079 2883	1779	0.920 7117	9.996 8939	26	20	
	50	9.076 3575	1754	9.079 4662	1779	0.920 5338	9.996 8913	25	10	
51	0	9.076 5329	1752	9.079 6441	1777	0.920 3559	9.996 8888	25	0	9
	10	9.076 7081	1752	9.079 8218	1777	0.920 1782	9.996 8863	26	50	
	20	9.076 8833	1751	9.079 9995	1776	0.920 0005	9.996 8837	25	40	
	30	9.077 0584	1750	9.080 1771	1776	0.919 8229	9.996 8812	25	30	
	40	9.077 2334	1749	9.080 3547	1775	0.919 6453	9.996 8787	26	20	
	50	9.077 4083	1749	9.080 5322	1774	0.919 4678	9.996 8761	25	10	
52	0	9.077 5832	1748	9.080 7096	1773	0.919 2904	9.996 8736	25	0	8
	10	9.077 7580	1747	9.080 8869	1773	0.919 1131	9.996 8711	26	50	
	20	9.077 9327	1747	9.081 0642	1772	0.918 9358	9.996 8685	25	40	
	30	9.078 1074	1746	9.081 2414	1771	0.918 7586	9.996 8660	25	30	
	40	9.078 2820	1745	9.081 4185	1771	0.918 5815	9.996 8635	26	20	
	50	9.078 4565	1745	9.081 5956	1770	0.918 4044	9.996 8609	25	10	
53	0	9.078 6310	1744	9.081 7726	1769	0.918 2274	9.996 8584	26	0	7
	10	9.078 8054	1743	9.081 9495	1769	0.918 0505	9.996 8558	25	50	
	20	9.078 9797	1742	9.082 1264	1768	0.917 8736	9.996 8533	26	40	
	30	9.079 1539	1742	9.082 3032	1767	0.917 6968	9.996 8507	25	30	
	40	9.079 3281	1741	9.082 4799	1766	0.917 5201	9.996 8482	25	20	
	50	9.079 5022	1740	9.082 6565	1766	0.917 3435	9.996 8457	26	10	
54	0	9.079 6762	1740	9.082 8331	1765	0.917 1669	9.996 8431	25	0	6
	10	9.079 8502	1738	9.083 0096	1764	0.916 9904	9.996 8406	26	50	
	20	9.080 0240	1739	9.083 1860	1764	0.916 8140	9.996 8380	25	40	
	30	9.080 1979	1737	9.083 3624	1763	0.916 6376	9.996 8355	26	30	
	40	9.080 3716	1737	9.083 5387	1762	0.916 4613	9.996 8329	25	20	
	50	9.080 5453	1736	9.083 7149	1762	0.916 2851	9.996 8304	26	10	
55	0	9.080 7189	1735	9.083 8911	1761	0.916 1089	9.996 8278	26	0	5
	10	9.080 8924	1735	9.084 0672	1760	0.915 9328	9.996 8252	25	50	
	20	9.081 0659	1734	9.084 2432	1759	0.915 7568	9.996 8227	26	40	
	30	9.081 2393	1733	9.084 4191	1759	0.915 5809	9.996 8201	25	30	
	40	9.081 4126	1732	9.084 5950	1758	0.915 4050	9.996 8176	26	20	
	50	9.081 5858	1732	9.084 7708	1758	0.915 2292	9.996 8150	25	10	
56	0	9.081 7590	1731	9.084 9466	1756	0.915 0534	9.996 8125	26	0	4
	10	9.081 9321	1731	9.085 1222	1756	0.914 8778	9.996 8099	26	50	
	20	9.082 1052	1729	9.085 2978	1756	0.914 7022	9.996 8073	25	40	
	30	9.082 2781	1729	9.085 4734	1754	0.914 5266	9.996 8048	26	30	
	40	9.082 4510	1729	9.085 6488	1754	0.914 3512	9.996 8022	26	20	
	50	9.082 6239	1727	9.085 8242	1754	0.914 1758	9.996 7996	25	10	
57	0	9.082 7966	1727	9.085 9996	1752	0.914 0004	9.996 7971	26	0	3
	10	9.082 9693	1726	9.086 1748	1752	0.913 8252	9.996 7945	26	50	
	20	9.083 1419	1726	9.086 3500	1751	0.913 6500	9.996 7919	25	40	
	30	9.083 3145	1725	9.086 5251	1751	0.913 4749	9.996 7894	26	30	
	40	9.083 4870	1724	9.086 7002	1750	0.913 2998	9.996 7868	26	20	
	50	9.083 6594	1723	9.086 8752	1749	0.913 1248	9.996 7842	25	10	
58	0	9.083 8317	1723	9.087 0501	1748	0.912 9499	9.996 7817	26	0	2
	10	9.084 0040	1722	9.087 2249	1748	0.912 7751	9.996 7791	26	50	
	20	9.084 1762	1722	9.087 3997	1747	0.912 6003	9.996 7765	26	40	
	30	9.084 3484	1720	9.087 5744	1747	0.912 4256	9.996 7739	25	30	
	40	9.084 5204	1720	9.087 7491	1745	0.912 2509	9.996 7714	26	20	
	50	9.084 6924	1719	9.087 9236	1745	0.912 0764	9.996 7688	26	10	
59	0	9.084 8643	1719	9.088 0981	1745	0.911 9019	9.996 7662	26	0	1
	10	9.085 0362	1718	9.088 2726	1744	0.911 7274	9.996 7636	26	50	
	20	9.085 2080	1717	9.088 4470	1743	0.911 5530	9.996 7610	25	40	
	30	9.085 3797	1717	9.088 6213	1742	0.911 3787	9.996 7585	26	30	
	40	9.085 5514	1716	9.088 7955	1742	0.911 2045	9.996 7559	26	20	
	50	9.085 7230	1715	9.088 9697	1741	0.911 0303	9.996 7533	26	10	
60	0	9.085 8945		9.089 1438		0.910 8562	9.996 7507		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

83°

	1780	1770	1760	1750	1740	1730	1720	1710
1	178	177	176	175	174	173	172	171
2	356	354	352	350	348	346	344	342
3	534	531	528	525	522	519	516	513
4	712	708	704	700	696	692	688	684
5	890	885	880	875	870	865	860	855
6	1068	1062	1056	1050	1044	1038	1032	1026
7	1246	1239	1232	1225	1218	1211	1204	1197
8	1424	1416	1408	1400	1392	1384	1376	1368
9	1602	1593	1584	1575	1566	1557	1548	1539

7°

1740	
1	174
2	348
3	522
4	696
5	870
6	1044
7	1218
8	1392
9	1566

1730	
1	173
2	346
3	519
4	692
5	865
6	1038
7	1211
8	1384
9	1557

1720	
1	172
2	344
3	516
4	688
5	860
6	1032
7	1204
8	1376
9	1548

1710	
1	171
2	342
3	513
4	684
5	855
6	1026
7	1197
8	1368
9	1539

1700	
1	170
2	340
3	510
4	680
5	850
6	1020
7	1190
8	1360
9	1530

1690	
1	169
2	338
3	507
4	676
5	845
6	1014
7	1183
8	1352
9	1521

1680	
1	168
2	336
3	504
4	672
5	840
6	1008
7	1176
8	1344
9	1512

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.085 8945	1714	9.089 1438	1740	0.910 8562	9.996 7507	26	0	60
	10	9.086 0659	1714	9.089 3178	1740	0.910 6822	9.996 7481	26	50	
	20	9.086 2373	1713	9.089 4918	1739	0.910 5082	9.996 7455	26	40	
	30	9.086 4086	1712	9.089 6657	1738	0.910 3343	9.996 7429	25	30	
	40	9.086 5798	1712	9.089 8395	1737	0.910 1605	9.996 7404	26	20	
	50	9.086 7510	1711	9.090 0132	1737	0.909 9868	9.996 7378	26	10	
1	0	9.086 9221	1711	9.090 1869	1737	0.909 8131	9.996 7352	26	0	59
	10	9.087 0932	1709	9.090 3606	1735	0.909 6394	9.996 7326	26	50	
	20	9.087 2641	1709	9.090 5341	1735	0.909 4659	9.996 7300	26	40	
	30	9.087 4350	1709	9.090 7076	1734	0.909 2924	9.996 7274	26	30	
	40	9.087 6059	1707	9.090 8810	1734	0.909 1190	9.996 7248	26	20	
	50	9.087 7766	1707	9.091 0544	1733	0.908 9456	9.996 7222	26	10	
2	0	9.087 9473	1706	9.091 2277	1732	0.908 7723	9.996 7196	26	0	58
	10	9.088 1179	1706	9.091 4009	1732	0.908 5991	9.996 7170	26	50	
	20	9.088 2885	1705	9.091 5741	1731	0.908 4259	9.996 7144	26	40	
	30	9.088 4590	1704	9.091 7472	1730	0.908 2528	9.996 7118	26	30	
	40	9.088 6294	1704	9.091 9202	1729	0.908 0798	9.996 7092	26	20	
	50	9.088 7998	1702	9.092 0931	1729	0.907 9069	9.996 7066	26	10	
3	0	9.088 9700	1703	9.092 2660	1729	0.907 7340	9.996 7040	26	0	57
	10	9.089 1403	1701	9.092 4389	1727	0.907 5611	9.996 7014	26	50	
	20	9.089 3104	1701	9.092 6116	1727	0.907 3884	9.996 6988	26	40	
	30	9.089 4805	1700	9.092 7843	1726	0.907 2157	9.996 6962	26	30	
	40	9.089 6505	1700	9.092 9569	1726	0.907 0431	9.996 6936	26	20	
	50	9.089 8205	1698	9.093 1295	1725	0.906 8705	9.996 6910	26	10	
4	0	9.089 9903	1699	9.093 3020	1724	0.906 6980	9.996 6884	26	0	56
	10	9.090 1602	1697	9.093 4744	1724	0.906 5256	9.996 6858	27	50	
	20	9.090 3299	1697	9.093 6468	1722	0.906 3532	9.996 6831	26	40	
	30	9.090 4996	1696	9.093 8190	1723	0.906 1810	9.996 6805	26	30	
	40	9.090 6692	1695	9.093 9913	1721	0.906 0087	9.996 6779	26	20	
	50	9.090 8387	1695	9.094 1634	1721	0.905 8366	9.996 6753	26	10	
5	0	9.091 0082	1694	9.094 3355	1720	0.905 6645	9.996 6727	26	0	55
	10	9.091 1776	1694	9.094 5075	1720	0.905 4925	9.996 6701	26	50	
	20	9.091 3470	1692	9.094 6795	1719	0.905 3205	9.996 6675	27	40	
	30	9.091 5162	1692	9.094 8514	1718	0.905 1486	9.996 6648	26	30	
	40	9.091 6854	1692	9.095 0232	1718	0.904 9768	9.996 6622	26	20	
	50	9.091 8546	1691	9.095 1950	1717	0.904 8050	9.996 6596	26	10	
6	0	9.092 0237	1690	9.095 3667	1716	0.904 6333	9.996 6570	27	0	54
	10	9.092 1927	1689	9.095 5383	1716	0.904 4617	9.996 6543	26	50	
	20	9.092 3616	1689	9.095 7099	1715	0.904 2901	9.996 6517	26	40	
	30	9.092 5305	1688	9.095 8814	1714	0.904 1186	9.996 6491	26	30	
	40	9.092 6993	1687	9.096 0528	1714	0.903 9472	9.996 6465	27	20	
	50	9.092 8680	1687	9.096 2242	1713	0.903 7758	9.996 6438	26	10	
7	0	9.093 0367	1686	9.096 3955	1712	0.903 6045	9.996 6412	26	0	53
	10	9.093 2053	1686	9.096 5667	1712	0.903 4333	9.996 6386	26	50	
	20	9.093 3739	1684	9.096 7379	1711	0.903 2621	9.996 6360	27	40	
	30	9.093 5423	1684	9.096 9090	1710	0.903 0910	9.996 6333	26	30	
	40	9.093 7107	1684	9.097 0800	1710	0.902 9200	9.996 6307	26	20	
	50	9.093 8791	1683	9.097 2510	1709	0.902 7490	9.996 6281	27	10	
8	0	9.094 0474	1682	9.097 4219	1709	0.902 5781	9.996 6254	26	0	52
	10	9.094 2156	1681	9.097 5928	1708	0.902 4072	9.996 6228	26	50	
	20	9.094 3837	1681	9.097 7636	1707	0.902 2364	9.996 6202	27	40	
	30	9.094 5518	1680	9.097 9343	1706	0.902 0657	9.996 6175	26	30	
	40	9.094 7198	1679	9.098 1049	1706	0.901 8951	9.996 6149	27	20	
	50	9.094 8877	1679	9.098 2755	1705	0.901 7245	9.996 6122	26	10	
9	0	9.095 0556	1678	9.098 4460	1705	0.901 5540	9.996 6096	26	0	51
	10	9.095 2234	1678	9.098 6165	1704	0.901 3835	9.996 6070	27	50	
	20	9.095 3912	1677	9.098 7869	1703	0.901 2131	9.996 6043	26	40	
	30	9.095 5589	1676	9.098 9572	1703	0.901 0428	9.996 6017	27	30	
	40	9.095 7265	1675	9.099 1275	1702	0.900 8725	9.996 5990	26	20	
	50	9.095 8940	1675	9.099 2977	1701	0.900 7023	9.996 5964	27	10	
10	0	9.096 0615		9.099 4678		0.900 5322	9.996 5937		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

82°

7°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.096 0615	1674	9.099 4678	1701	0.900 5322	9.996 5937	26	0	50
	10	9.096 2289	1674	9.099 6379	1700	0.900 3621	9.996 5911	27	50	
	20	9.096 3963	1673	9.099 8079	1699	0.900 1921	9.996 5884	26	40	
	30	9.096 5636	1672	9.099 9778	1699	0.900 0222	9.996 5858	27	30	
	40	9.096 7308	1672	9.100 1477	1698	0.899 8523	9.996 5831	26	20	
	50	9.096 8980	1671	9.100 3175	1697	0.899 6825	9.996 5805	27	10	
11	0	9.097 0651	1670	9.100 4872	1697	0.899 5128	9.996 5778	26	0	49
	10	9.097 2321	1669	9.100 6569	1696	0.899 3431	9.996 5752	27	50	
	20	9.097 3990	1669	9.100 8265	1696	0.899 1735	9.996 5725	26	40	
	30	9.097 5659	1669	9.100 9961	1695	0.899 0039	9.996 5699	27	30	
	40	9.097 7328	1667	9.101 1656	1694	0.898 8344	9.996 5672	27	20	
	50	9.097 8995	1667	9.101 3350	1694	0.898 6650	9.996 5645	26	10	
12	0	9.098 0662	1667	9.101 5044	1693	0.898 4956	9.996 5619	27	0	48
	10	9.098 2329	1666	9.101 6737	1692	0.898 3263	9.996 5592	26	50	
	20	9.098 3995	1665	9.101 8429	1692	0.898 1571	9.996 5566	27	40	
	30	9.098 5660	1664	9.102 0121	1691	0.897 9879	9.996 5539	27	30	
	40	9.098 7324	1664	9.102 1812	1690	0.897 8188	9.996 5512	26	20	
	50	9.098 8988	1663	9.102 3502	1690	0.897 6498	9.996 5486	27	10	
13	0	9.099 0651	1662	9.102 5192	1689	0.897 4808	9.996 5459	27	0	47
	10	9.099 2313	1662	9.102 6881	1688	0.897 3119	9.996 5432	26	50	
	20	9.099 3975	1661	9.102 8569	1688	0.897 1431	9.996 5406	27	40	
	30	9.099 5636	1661	9.103 0257	1688	0.896 9743	9.996 5379	27	30	
	40	9.099 7297	1660	9.103 1945	1686	0.896 8055	9.996 5352	26	20	
	50	9.099 8957	1659	9.103 3631	1686	0.896 6369	9.996 5326	27	10	
14	0	9.100 0616	1659	9.103 5317	1685	0.896 4683	9.996 5299	27	0	46
	10	9.100 2275	1658	9.103 7002	1685	0.896 2998	9.996 5272	27	50	
	20	9.100 3933	1657	9.103 8687	1684	0.896 1313	9.996 5245	26	40	
	30	9.100 5590	1657	9.104 0371	1684	0.895 9629	9.996 5219	27	30	
	40	9.100 7247	1656	9.104 2055	1683	0.895 7945	9.996 5192	27	20	
	50	9.100 8903	1655	9.104 3738	1682	0.895 6262	9.996 5165	27	10	
15	0	9.101 0558	1655	9.104 5420	1681	0.895 4580	9.996 5138	26	0	45
	10	9.101 2213	1654	9.104 7101	1681	0.895 2899	9.996 5112	27	50	
	20	9.101 3867	1653	9.104 8782	1680	0.895 1218	9.996 5085	27	40	
	30	9.101 5520	1653	9.105 0462	1680	0.894 9538	9.996 5058	27	30	
	40	9.101 7173	1652	9.105 2142	1679	0.894 7858	9.996 5031	27	20	
	50	9.101 8825	1652	9.105 3821	1679	0.894 6179	9.996 5004	27	10	
16	0	9.102 0477	1651	9.105 5500	1677	0.894 4500	9.996 4977	26	0	44
	10	9.102 2128	1650	9.105 7177	1677	0.894 2823	9.996 4951	27	50	
	20	9.102 3778	1650	9.105 8854	1677	0.894 1146	9.996 4924	27	40	
	30	9.102 5428	1649	9.106 0531	1676	0.893 9469	9.996 4897	27	30	
	40	9.102 7077	1648	9.106 2207	1675	0.893 7793	9.996 4870	27	20	
	50	9.102 8725	1648	9.106 3882	1675	0.893 6118	9.996 4843	27	10	
17	0	9.103 0373	1647	9.106 5557	1674	0.893 4443	9.996 4816	27	0	43
	10	9.103 2020	1647	9.106 7231	1673	0.893 2769	9.996 4789	27	50	
	20	9.103 3667	1645	9.106 8904	1673	0.893 1096	9.996 4762	27	40	
	30	9.103 5312	1646	9.107 0577	1672	0.892 9423	9.996 4735	27	30	
	40	9.103 6958	1644	9.107 2249	1672	0.892 7751	9.996 4708	26	20	
	50	9.103 8602	1644	9.107 3921	1670	0.892 6079	9.996 4682	27	10	
18	0	9.104 0246	1643	9.107 5591	1671	0.892 4409	9.996 4655	27	0	42
	10	9.104 1889	1643	9.107 7262	1669	0.892 2738	9.996 4628	27	50	
	20	9.104 3532	1642	9.107 8931	1669	0.892 1069	9.996 4601	27	40	
	30	9.104 5174	1641	9.108 0600	1669	0.891 9400	9.996 4574	27	30	
	40	9.104 6815	1641	9.108 2269	1668	0.891 7731	9.996 4547	27	20	
	50	9.104 8456	1640	9.108 3937	1667	0.891 6063	9.996 4520	27	10	
19	0	9.105 0096	1640	9.108 5604	1666	0.891 4396	9.996 4493	27	0	41
	10	9.105 1736	1639	9.108 7270	1666	0.891 2730	9.996 4466	28	50	
	20	9.105 3375	1638	9.108 8936	1666	0.891 1064	9.996 4438	27	40	
	30	9.105 5013	1638	9.109 0602	1664	0.890 9398	9.996 4411	27	30	
	40	9.105 6651	1637	9.109 2266	1664	0.890 7734	9.996 4384	27	20	
	50	9.105 8288	1636	9.109 3930	1664	0.890 6070	9.996 4357	27	10	
20	0	9.105 9924		9.109 5594		0.890 4406	9.996 4330		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

82°

1690	
1	169
2	338
3	507
4	676
5	845
6	1014
7	1183
8	1352
9	1521

1680	
1	168
2	336
3	504
4	672
5	840
6	1008
7	1176
8	1344
9	1512

1670	
1	167
2	334
3	501
4	668
5	835
6	1002
7	1169
8	1336
9	1503

1660	
1	166
2	332
3	498
4	664
5	830
6	996
7	1162
8	1328
9	1494

1650	
1	165
2	330
3	495
4	660
5	825
6	990
7	1155
8	1320
9	1485

1640	
1	164
2	328
3	492
4	656
5	820
6	984
7	1148
8	1312
9	1476

1630	
1	163
2	326
3	489
4	652
5	815
6	978
7	1141
8	1304
9	1467

7°

1660	
1	166
2	332
3	498
4	664
5	830
6	996
7	1162
8	1328
9	1494

1650	
1	165
2	330
3	495
4	660
5	825
6	990
7	1155
8	1320
9	1485

1640	
1	164
2	328
3	492
4	656
5	820
6	984
7	1148
8	1312
9	1476

1630	
1	163
2	326
3	489
4	652
5	815
6	978
7	1141
8	1304
9	1467

1620	
1	162
2	324
3	486
4	648
5	810
6	972
7	1134
8	1296
9	1458

1610	
1	161
2	322
3	483
4	644
5	805
6	966
7	1127
8	1288
9	1449

1600	
1	160
2	320
3	480
4	640
5	800
6	960
7	1120
8	1280
9	1440

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.105 9924	1636	9.109 5594	1663	0.890 4406	9.996 4330	27	0	40
	10	9.106 1560	1635	9.109 7257	1662	0.890 2743	9.996 4303	27	50	
	20	9.106 3195	1634	9.109 8919	1662	0.890 1081	9.996 4276	27	40	
	30	9.106 4829	1634	9.110 0581	1661	0.889 9419	9.996 4249	27	30	
	40	9.106 6463	1634	9.110 2242	1660	0.889 7758	9.996 4222	27	20	
	50	9.106 8097	1632	9.110 3902	1660	0.889 6098	9.996 4195	28	10	
21	0	9.106 9729	1632	9.110 5562	1659	0.889 4438	9.996 4167	27	0	39
	10	9.107 1361	1632	9.110 7221	1658	0.889 2779	9.996 4140	27	50	
	20	9.107 2993	1630	9.110 8879	1658	0.889 1121	9.996 4113	27	40	
	30	9.107 4623	1630	9.111 0537	1658	0.888 9463	9.996 4086	27	30	
	40	9.107 6253	1630	9.111 2195	1656	0.888 7805	9.996 4059	28	20	
	50	9.107 7883	1629	9.111 3851	1657	0.888 6149	9.996 4031	27	10	
22	0	9.107 9512	1628	9.111 5508	1655	0.888 4492	9.996 4004	27	0	38
	10	9.108 1140	1628	9.111 7163	1655	0.888 2837	9.996 3977	27	50	
	20	9.108 2768	1627	9.111 8818	1654	0.888 1182	9.996 3950	27	40	
	30	9.108 4395	1626	9.112 0472	1654	0.887 9528	9.996 3923	28	30	
	40	9.108 6021	1626	9.112 2126	1653	0.887 7874	9.996 3895	27	20	
	50	9.108 7647	1625	9.112 3779	1652	0.887 6221	9.996 3868	27	10	
23	0	9.108 9272	1625	9.112 5431	1652	0.887 4569	9.996 3841	28	0	37
	10	9.109 0897	1624	9.112 7083	1651	0.887 2917	9.996 3813	27	50	
	20	9.109 2521	1623	9.112 8734	1651	0.887 1266	9.996 3786	27	40	
	30	9.109 4144	1623	9.113 0385	1650	0.886 9615	9.996 3759	27	30	
	40	9.109 5767	1622	9.113 2035	1650	0.886 7965	9.996 3732	28	20	
	50	9.109 7389	1621	9.113 3685	1648	0.886 6315	9.996 3704	27	10	
24	0	9.109 9010	1621	9.113 5333	1649	0.886 4667	9.996 3677	28	0	36
	10	9.110 0631	1620	9.113 6982	1647	0.886 3018	9.996 3649	27	50	
	20	9.110 2251	1620	9.113 8629	1647	0.886 1371	9.996 3622	27	40	
	30	9.110 3871	1619	9.114 0276	1646	0.885 9724	9.996 3595	28	30	
	40	9.110 5490	1618	9.114 1922	1646	0.885 8078	9.996 3567	27	20	
	50	9.110 7108	1618	9.114 3568	1645	0.885 6432	9.996 3540	27	10	
25	0	9.110 8726	1617	9.114 5213	1645	0.885 4787	9.996 3513	28	0	35
	10	9.111 0343	1617	9.114 6858	1644	0.885 3142	9.996 3485	27	50	
	20	9.111 1960	1616	9.114 8502	1643	0.885 1498	9.996 3458	28	40	
	30	9.111 3576	1615	9.115 0145	1643	0.884 9855	9.996 3430	27	30	
	40	9.111 5191	1615	9.115 1788	1642	0.884 8212	9.996 3403	28	20	
	50	9.111 6806	1614	9.115 3430	1642	0.884 6570	9.996 3375	27	10	
26	0	9.111 8420	1613	9.115 5072	1641	0.884 4928	9.996 3348	28	0	34
	10	9.112 0033	1613	9.115 6713	1640	0.884 3287	9.996 3320	27	50	
	20	9.112 1646	1613	9.115 8353	1640	0.884 1647	9.996 3293	28	40	
	30	9.112 3259	1611	9.115 9993	1639	0.884 0007	9.996 3265	27	30	
	40	9.112 4870	1611	9.116 1632	1639	0.883 8368	9.996 3238	28	20	
	50	9.112 6481	1611	9.116 3271	1638	0.883 6729	9.996 3210	27	10	
27	0	9.112 8092	1610	9.116 4909	1637	0.883 5091	9.996 3183	28	0	33
	10	9.112 9702	1609	9.116 6546	1637	0.883 3454	9.996 3155	27	50	
	20	9.113 1311	1609	9.116 8183	1636	0.883 1817	9.996 3128	28	40	
	30	9.113 2920	1608	9.116 9819	1636	0.883 0181	9.996 3100	27	30	
	40	9.113 4528	1607	9.117 1455	1635	0.882 8545	9.996 3073	28	20	
	50	9.113 6135	1607	9.117 3090	1634	0.882 6910	9.996 3045	27	10	
28	0	9.113 7742	1606	9.117 4724	1634	0.882 5276	9.996 3018	28	0	32
	10	9.113 9348	1606	9.117 6358	1633	0.882 3642	9.996 2990	28	50	
	20	9.114 0954	1605	9.117 7991	1633	0.882 2009	9.996 2962	27	40	
	30	9.114 2559	1604	9.117 9624	1632	0.882 0376	9.996 2935	28	30	
	40	9.114 4163	1604	9.118 1256	1631	0.881 8744	9.996 2907	28	20	
	50	9.114 5767	1603	9.118 2887	1631	0.881 7113	9.996 2879	27	10	
29	0	9.114 7370	1603	9.118 4518	1631	0.881 5482	9.996 2852	28	0	31
	10	9.114 8973	1602	9.118 6149	1629	0.881 3851	9.996 2824	28	50	
	20	9.115 0575	1601	9.118 7778	1629	0.881 2222	9.996 2796	27	40	
	30	9.115 2176	1601	9.118 9407	1629	0.881 0593	9.996 2769	28	30	
	40	9.115 3777	1600	9.119 1036	1628	0.880 8964	9.996 2741	28	20	
	50	9.115 5377	1600	9.119 2664	1627	0.880 7336	9.996 2713	27	10	
30	0	9.115 6977		9.119 4291		0.880 5709	9.996 2686		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

82°

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′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.115 6977	1599	9.119 4291	1627	0.880 5709	9.996 2686	28	0	30
	10	9.115 8576	1598	9.119 5918	1626	0.880 4082	9.996 2658	28	50	
	20	9.116 0174	1598	9.119 7544	1625	0.880 2456	9.996 2630	28	40	
	30	9.116 1772	1597	9.119 9169	1625	0.880 0831	9.996 2602	27	30	
	40	9.116 3369	1597	9.120 0794	1625	0.879 9206	9.996 2575	28	20	
	50	9.116 4966	1596	9.120 2419	1624	0.879 7581	9.996 2547	28	10	
31	0	9.116 6562	1595	9.120 4043	1623	0.879 5957	9.996 2519	28	0	29
	10	9.116 8157	1595	9.120 5666	1622	0.879 4334	9.996 2491	27	50	
	20	9.116 9752	1594	9.120 7288	1622	0.879 2712	9.996 2464	28	40	
	30	9.117 1346	1594	9.120 8910	1622	0.879 1090	9.996 2436	28	30	
	40	9.117 2940	1593	9.121 0532	1621	0.878 9468	9.996 2408	28	20	
	50	9.117 4533	1592	9.121 2153	1620	0.878 7847	9.996 2380	28	10	
32	0	9.117 6125	1592	9.121 3773	1620	0.878 6227	9.996 2352	28	0	28
	10	9.117 7717	1591	9.121 5393	1619	0.878 4607	9.996 2324	27	50	
	20	9.117 9308	1591	9.121 7012	1618	0.878 2988	9.996 2297	28	40	
	30	9.118 0899	1590	9.121 8630	1618	0.878 1370	9.996 2269	28	30	
	40	9.118 2489	1590	9.122 0248	1618	0.877 9752	9.996 2241	28	20	
	50	9.118 4079	1588	9.122 1866	1616	0.877 8134	9.996 2213	28	10	
33	0	9.118 5667	1589	9.122 3482	1617	0.877 6518	9.996 2185	28	0	27
	10	9.118 7256	1587	9.122 5099	1615	0.877 4901	9.996 2157	28	50	
	20	9.118 8843	1588	9.122 6714	1615	0.877 3286	9.996 2129	28	40	
	30	9.119 0431	1586	9.122 8329	1615	0.877 1671	9.996 2101	28	30	
	40	9.119 2017	1586	9.122 9944	1614	0.877 0056	9.996 2073	28	20	
	50	9.119 3603	1585	9.123 1558	1613	0.876 8442	9.996 2045	28	10	
34	0	9.119 5188	1585	9.123 3171	1613	0.876 6829	9.996 2017	28	0	26
	10	9.119 6773	1584	9.123 4784	1612	0.876 5216	9.996 1989	28	50	
	20	9.119 8357	1584	9.123 6396	1611	0.876 3604	9.996 1961	28	40	
	30	9.119 9941	1583	9.123 8007	1611	0.876 1993	9.996 1933	28	30	
	40	9.120 1524	1582	9.123 9618	1611	0.876 0382	9.996 1905	28	20	
	50	9.120 3106	1582	9.124 1229	1610	0.875 8771	9.996 1877	28	10	
35	0	9.120 4688	1581	9.124 2839	1609	0.875 7161	9.996 1849	28	0	25
	10	9.120 6269	1581	9.124 4448	1609	0.875 5552	9.996 1821	28	50	
	20	9.120 7850	1580	9.124 6057	1608	0.875 3943	9.996 1793	28	40	
	30	9.120 9430	1579	9.124 7665	1607	0.875 2335	9.996 1765	28	30	
	40	9.121 1009	1579	9.124 9272	1607	0.875 0728	9.996 1737	28	20	
	50	9.121 2588	1579	9.125 0879	1607	0.874 9121	9.996 1709	28	10	
36	0	9.121 4167	1577	9.125 2486	1605	0.874 7514	9.996 1681	28	0	24
	10	9.121 5744	1578	9.125 4091	1606	0.874 5909	9.996 1653	28	50	
	20	9.121 7322	1576	9.125 5697	1604	0.874 4303	9.996 1625	28	40	
	30	9.121 8898	1576	9.125 7301	1604	0.874 2699	9.996 1597	28	30	
	40	9.122 0474	1575	9.125 8905	1604	0.874 1095	9.996 1569	29	20	
	50	9.122 2049	1575	9.126 0509	1603	0.873 9491	9.996 1540	28	10	
37	0	9.122 3624	1574	9.126 2112	1602	0.873 7888	9.996 1512	28	0	23
	10	9.122 5198	1574	9.126 3714	1602	0.873 6286	9.996 1484	28	50	
	20	9.122 6772	1573	9.126 5316	1601	0.873 4684	9.996 1456	28	40	
	30	9.122 8345	1573	9.126 6917	1601	0.873 3083	9.996 1428	28	30	
	40	9.122 9918	1572	9.126 8518	1600	0.873 1482	9.996 1400	29	20	
	50	9.123 1490	1571	9.127 0118	1600	0.872 9882	9.996 1371	28	10	
38	0	9.123 3061	1571	9.127 1718	1599	0.872 8282	9.996 1343	28	0	22
	10	9.123 4632	1570	9.127 3317	1598	0.872 6683	9.996 1315	28	50	
	20	9.123 6202	1569	9.127 4915	1598	0.872 5085	9.996 1287	29	40	
	30	9.123 7771	1569	9.127 6513	1597	0.872 3487	9.996 1258	28	30	
	40	9.123 9340	1569	9.127 8110	1597	0.872 1890	9.996 1230	28	20	
	50	9.124 0909	1568	9.127 9707	1596	0.872 0293	9.996 1202	28	10	
39	0	9.124 2477	1567	9.128 1303	1596	0.871 8697	9.996 1174	29	0	21
	10	9.124 4044	1567	9.128 2899	1595	0.871 7101	9.996 1145	28	50	
	20	9.124 5611	1566	9.128 4494	1594	0.871 5506	9.996 1117	28	40	
	30	9.124 7177	1565	9.128 6088	1594	0.871 3912	9.996 1089	29	30	
	40	9.124 8742	1565	9.128 7682	1593	0.871 2318	9.996 1060	28	20	
	50	9.125 0307	1565	9.128 9275	1593	0.871 0725	9.996 1032	28	10	
40	0	9.125 1872		9.129 0868		0.870 9132	9.996 1004		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

82°

	1620
1	161
2	324
3	486
4	648
5	810
6	972
7	1134
8	1296
9	1458

	1610
1	161
2	322
3	483
4	644
5	805
6	966
7	1127
8	1288
9	1449

	1600
1	160
2	320
3	480
4	640
5	800
6	960
7	1120
8	1280
9	1440

	1590
1	159
2	318
3	477
4	636
5	795
6	954
7	1113
8	1272
9	1431

	1580
1	158
2	316
3	474
4	632
5	790
6	948
7	1106
8	1264
9	1422

	1570
1	157
2	314
3	471
4	628
5	785
6	942
7	1099
8	1256
9	1413

	1560
1	156
2	312
3	468
4	624
5	780
6	936
7	1092
8	1248
9	1404

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1590	
1	159
2	318
3	477
4	636
5	795
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7	1113
8	1272
9	1431

1580	
1	158
2	316
3	474
4	632
5	790
6	948
7	1106
8	1264
9	1422

1570	
1	157
2	314
3	471
4	628
5	785
6	942
7	1099
8	1256
9	1413

1560	
1	156
2	312
3	468
4	624
5	780
6	936
7	1092
8	1248
9	1404

1550	
1	155
2	310
3	465
4	620
5	775
6	930
7	1085
8	1240
9	1395

1540	
1	154
2	308
3	462
4	616
5	770
6	924
7	1078
8	1232
9	1386

1530	
1	153
2	306
3	459
4	612
5	765
6	918
7	1071
8	1224
9	1377

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.125 1872	1564	9.129 0868	1592	0.870 9132	9.996 1004	29	0	20
	10	9.125 3436	1563	9.129 2460	1592	0.870 7540	9.996 0975	28	50	
	20	9.125 4999	1563	9.129 4052	1591	0.870 5948	9.996 0947	28	40	
	30	9.125 6562	1562	9.129 5643	1590	0.870 4357	9.996 0919	29	30	
	40	9.125 8124	1561	9.129 7233	1590	0.870 2767	9.996 0890	28	20	
	50	9.125 9685	1561	9.129 8823	1590	0.870 1177	9.996 0862	28	10	
41	0	9.126 1246	1561	9.130 0413	1589	0.869 9587	9.996 0834	29	0	19
	10	9.126 2807	1560	9.130 2002	1588	0.869 7998	9.996 0805	28	50	
	20	9.126 4367	1559	9.130 3590	1588	0.869 6410	9.996 0777	29	40	
	30	9.126 5926	1559	9.130 5178	1587	0.869 4822	9.996 0748	28	30	
	40	9.126 7485	1558	9.130 6765	1586	0.869 3235	9.996 0720	29	20	
	50	9.126 9043	1557	9.130 8351	1586	0.869 1649	9.996 0691	28	10	
42	0	9.127 0600	1557	9.130 9937	1586	0.869 0063	9.996 0663	29	0	18
	10	9.127 2157	1557	9.131 1523	1585	0.868 8477	9.996 0634	28	50	
	20	9.127 3714	1555	9.131 3108	1584	0.868 6892	9.996 0606	29	40	
	30	9.127 5269	1556	9.131 4692	1584	0.868 5308	9.996 0577	28	30	
	40	9.127 6825	1555	9.131 6276	1583	0.868 3724	9.996 0549	29	20	
	50	9.127 8380	1554	9.131 7859	1583	0.868 2141	9.996 0520	28	10	
43	0	9.127 9934	1553	9.131 9442	1582	0.868 0558	9.996 0492	29	0	17
	10	9.128 1487	1553	9.132 1024	1581	0.867 8976	9.996 0463	28	50	
	20	9.128 3040	1553	9.132 2605	1581	0.867 7395	9.996 0435	29	40	
	30	9.128 4593	1552	9.132 4186	1581	0.867 5814	9.996 0406	28	30	
	40	9.128 6145	1551	9.132 5767	1580	0.867 4233	9.996 0378	29	20	
	50	9.128 7696	1551	9.132 7347	1579	0.867 2653	9.996 0349	28	10	
44	0	9.128 9247	1550	9.132 8926	1579	0.867 1074	9.996 0321	29	0	16
	10	9.129 0797	1550	9.133 0505	1578	0.866 9495	9.996 0292	29	50	
	20	9.129 2347	1549	9.133 2083	1578	0.866 7917	9.996 0263	28	40	
	30	9.129 3896	1548	9.133 3661	1577	0.866 6339	9.996 0235	29	30	
	40	9.129 5444	1548	9.133 5238	1577	0.866 4762	9.996 0206	29	20	
	50	9.129 6992	1547	9.133 6815	1576	0.866 3185	9.996 0177	28	10	
45	0	9.129 8539	1547	9.133 8391	1575	0.866 1609	9.996 0149	29	0	15
	10	9.130 0086	1547	9.133 9966	1575	0.866 0034	9.996 0120	29	50	
	20	9.130 1633	1545	9.134 1541	1574	0.865 8459	9.996 0091	28	40	
	30	9.130 3178	1545	9.134 3115	1574	0.865 6885	9.996 0063	29	30	
	40	9.130 4723	1545	9.134 4689	1574	0.865 5311	9.996 0034	29	20	
	50	9.130 6268	1544	9.134 6263	1572	0.865 3737	9.996 0005	28	10	
46	0	9.130 7812	1543	9.134 7835	1573	0.865 2165	9.995 9977	29	0	14
	10	9.130 9355	1543	9.134 9408	1571	0.865 0592	9.995 9948	29	50	
	20	9.131 0898	1543	9.135 0979	1571	0.864 9021	9.995 9919	28	40	
	30	9.131 2441	1542	9.135 2550	1571	0.864 7450	9.995 9891	29	30	
	40	9.131 3983	1541	9.135 4121	1570	0.864 5879	9.995 9862	29	20	
	50	9.131 5524	1540	9.135 5691	1569	0.864 4309	9.995 9833	29	10	
47	0	9.131 7064	1541	9.135 7260	1569	0.864 2740	9.995 9804	29	0	13
	10	9.131 8605	1539	9.135 8829	1568	0.864 1171	9.995 9775	28	50	
	20	9.132 0144	1539	9.136 0397	1568	0.863 9603	9.995 9747	29	40	
	30	9.132 1683	1539	9.136 1965	1568	0.863 8035	9.995 9718	29	30	
	40	9.132 3222	1537	9.136 3533	1566	0.863 6467	9.995 9689	29	20	
	50	9.132 4759	1538	9.136 5099	1566	0.863 4901	9.995 9660	29	10	
48	0	9.132 6297	1537	9.136 6665	1566	0.863 3335	9.995 9631	29	0	12
	10	9.132 7834	1536	9.136 8231	1565	0.863 1769	9.995 9602	28	50	
	20	9.132 9370	1536	9.136 9796	1565	0.863 0204	9.995 9574	29	40	
	30	9.133 0906	1535	9.137 1361	1564	0.862 8639	9.995 9545	29	30	
	40	9.133 2441	1534	9.137 2925	1563	0.862 7075	9.995 9516	29	20	
	50	9.133 3975	1534	9.137 4488	1563	0.862 5512	9.995 9487	29	10	
49	0	9.133 5509	1534	9.137 6051	1563	0.862 3949	9.995 9458	29	0	11
	10	9.133 7043	1533	9.137 7614	1561	0.862 2386	9.995 9429	29	50	
	20	9.133 8576	1532	9.137 9175	1562	0.862 0825	9.995 9400	29	40	
	30	9.134 0108	1532	9.138 0737	1560	0.861 9263	9.995 9371	29	30	
	40	9.134 1640	1531	9.138 2297	1561	0.861 7703	9.995 9342	29	20	
	50	9.134 3171	1531	9.138 3858	1559	0.861 6142	9.995 9313	29	10	
50	0	9.134 4702		9.138 5417		0.861 4583	9.995 9284		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

82°

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′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.134 4702	1530	9.138 5417	1559	0.861 4583	9.995 9284	28	0	10
	10	9.134 6232	1530	9.138 6976	1559	0.861 3024	9.995 9256	29	50	
	20	9.134 7762	1529	9.138 8535	1558	0.861 1465	9.995 9227	29	40	
	30	9.134 9291	1528	9.139 0093	1558	0.860 9907	9.995 9198	29	30	
	40	9.135 0819	1528	9.139 1651	1557	0.860 8349	9.995 9169	29	20	
	50	9.135 2347	1528	9.139 3208	1556	0.860 6792	9.995 9140	29	10	
51	0	9.135 3875	1527	9.139 4764	1556	0.860 5236	9.995 9111	30	0	9
	10	9.135 5402	1526	9.139 6320	1555	0.860 3680	9.995 9081	29	50	
	20	9.135 6928	1526	9.139 7875	1555	0.860 2125	9.995 9052	29	40	
	30	9.135 8454	1525	9.139 9430	1555	0.860 0570	9.995 9023	29	30	
	40	9.135 9979	1525	9.140 0985	1553	0.859 9015	9.995 8994	29	20	
	50	9.136 1504	1524	9.140 2538	1554	0.859 7462	9.995 8965	29	10	
52	0	9.136 3028	1523	9.140 4092	1552	0.859 5908	9.995 8936	29	0	8
	10	9.136 4551	1523	9.140 5644	1552	0.859 4356	9.995 8907	29	50	
	20	9.136 6074	1523	9.140 7196	1552	0.859 2804	9.995 8878	29	40	
	30	9.136 7597	1522	9.140 8748	1551	0.859 1252	9.995 8849	29	30	
	40	9.136 9119	1521	9.141 0299	1551	0.858 9701	9.995 8820	29	20	
	50	9.137 0640	1521	9.141 1850	1550	0.858 8150	9.995 8791	30	10	
53	0	9.137 2161	1521	9.141 3400	1549	0.858 6600	9.995 8761	29	0	7
	10	9.137 3682	1519	9.141 4949	1549	0.858 5051	9.995 8732	29	50	
	20	9.137 5201	1520	9.141 6498	1549	0.858 3502	9.995 8703	29	40	
	30	9.137 6721	1518	9.141 8047	1548	0.858 1953	9.995 8674	29	30	
	40	9.137 8239	1518	9.141 9595	1547	0.858 0405	9.995 8645	29	20	
	50	9.137 9757	1518	9.142 1142	1547	0.857 8858	9.995 8616	30	10	
54	0	9.138 1275	1517	9.142 2689	1546	0.857 7311	9.995 8586	29	0	6
	10	9.138 2792	1517	9.142 4235	1546	0.857 5765	9.995 8557	29	50	
	20	9.138 4309	1516	9.142 5781	1545	0.857 4219	9.995 8528	29	40	
	30	9.138 5825	1515	9.142 7326	1545	0.857 2674	9.995 8499	30	30	
	40	9.138 7340	1515	9.142 8871	1544	0.857 1129	9.995 8469	29	20	
	50	9.138 8855	1515	9.143 0415	1544	0.856 9585	9.995 8440	29	10	
55	0	9.139 0370	1513	9.143 1959	1543	0.856 8041	9.995 8411	29	0	5
	10	9.139 1883	1514	9.143 3502	1543	0.856 6498	9.995 8382	30	50	
	20	9.139 3397	1513	9.143 5045	1542	0.856 4955	9.995 8352	29	40	
	30	9.139 4910	1512	9.143 6587	1541	0.856 3413	9.995 8323	29	30	
	40	9.139 6422	1512	9.143 8128	1541	0.856 1872	9.995 8294	30	20	
	50	9.139 7934	1511	9.143 9669	1541	0.856 0331	9.995 8264	29	10	
56	0	9.139 9445	1510	9.144 1210	1540	0.855 8790	9.995 8235	29	0	4
	10	9.140 0955	1510	9.144 2750	1539	0.855 7250	9.995 8206	30	50	
	20	9.140 2465	1510	9.144 4289	1539	0.855 5711	9.995 8176	29	40	
	30	9.140 3975	1509	9.144 5828	1539	0.855 4172	9.995 8147	30	30	
	40	9.140 5484	1509	9.144 7367	1537	0.855 2633	9.995 8117	29	20	
	50	9.140 6993	1508	9.144 8904	1538	0.855 1096	9.995 8088	29	10	
57	0	9.140 8501	1507	9.145 0442	1537	0.854 9558	9.995 8059	30	0	3
	10	9.141 0008	1507	9.145 1979	1536	0.854 8021	9.995 8029	29	50	
	20	9.141 1515	1506	9.145 3515	1536	0.854 6485	9.995 8000	30	40	
	30	9.141 3021	1506	9.145 5051	1535	0.854 4949	9.995 7970	29	30	
	40	9.141 4527	1505	9.145 6586	1535	0.854 3414	9.995 7941	29	20	
	50	9.141 6032	1505	9.145 8121	1534	0.854 1879	9.995 7912	30	10	
58	0	9.141 7537	1504	9.145 9655	1534	0.854 0345	9.995 7882	29	0	2
	10	9.141 9041	1504	9.146 1189	1533	0.853 8811	9.995 7853	30	50	
	20	9.142 0545	1503	9.146 2722	1533	0.853 7278	9.995 7823	29	40	
	30	9.142 2048	1503	9.146 4255	1532	0.853 5745	9.995 7794	30	30	
	40	9.142 3551	1502	9.146 5787	1531	0.853 4213	9.995 7764	29	20	
	50	9.142 5053	1502	9.146 7318	1531	0.853 2682	9.995 7735	30	10	
59	0	9.142 6555	1501	9.146 8849	1531	0.853 1151	9.995 7705	29	0	1
	10	9.142 8056	1500	9.147 0380	1530	0.852 9620	9.995 7676	30	50	
	20	9.142 9556	1500	9.147 1910	1530	0.852 8090	9.995 7646	30	40	
	30	9.143 1056	1500	9.147 3440	1529	0.852 6560	9.995 7616	29	30	
	40	9.143 2556	1499	9.147 4969	1528	0.852 5031	9.995 7587	30	20	
	50	9.143 4055	1498	9.147 6497	1528	0.852 3503	9.995 7557	29	10	
60	0	9.143 5553		9.147 8025		0.852 1975	9.995 7528		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

82°

1560	
1	156
2	312
3	468
4	624
5	780
6	936
7	1092
8	1248
9	1404

1550	
1	155
2	310
3	465
4	620
5	775
6	930
7	1085
8	1240
9	1395

1540	
1	154
2	308
3	462
4	616
5	770
6	924
7	1078
8	1232
9	1386

1530	
1	153
2	306
3	459
4	612
5	765
6	918
7	1071
8	1224
9	1377

1520	
1	152
2	304
3	456
4	608
5	760
6	912
7	1064
8	1216
9	1368

1510	
1	151
2	302
3	453
4	604
5	755
6	906
7	1057
8	1208
9	1359

1500	
1	150
2	300
3	450
4	600
5	750
6	900
7	1050
8	1200
9	1350

8°

1530	
1	153
2	306
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4	612
5	765
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8	1224
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6	912
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6	906
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1500	
1	150
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3	450
4	600
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6	900
7	1050
8	1200
9	1350

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2	298
3	447
4	596
5	745
6	894
7	1043
8	1192
9	1341

1480	
1	148
2	296
3	444
4	592
5	740
6	888
7	1036
8	1184
9	1332

1470	
1	147
2	294
3	441
4	588
5	735
6	882
7	1029
8	1176
	1323

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.143 5553	1498	9.147 8025	1528	0.852 1975	9.995 7528	30	0	60
	10	9.143 7051	1497	9.147 9553	1527	0.852 0447	9.995 7498	29	50	
	20	9.143 8548	1497	9.148 1080	1526	0.851 8920	9.995 7469	30	40	
	30	9.144 0045	1496	9.148 2606	1526	0.851 7394	9.995 7439	30	30	
	40	9.144 1541	1496	9.148 4132	1526	0.851 5868	9.995 7409	29	20	
	50	9.144 3037	1495	9.148 5658	1524	0.851 4342	9.995 7380	30	10	
1	0	9.144 4532	1495	9.148 7182	1525	0.851 2818	9.995 7350	30	0	59
	10	9.144 6027	1494	9.148 8707	1524	0.851 1293	9.995 7320	29	50	
	20	9.144 7521	1494	9.149 0231	1523	0.850 9769	9.995 7291	30	40	
	30	9.144 9015	1493	9.149 1754	1523	0.850 8246	9.995 7261	30	30	
	40	9.145 0508	1493	9.149 3277	1522	0.850 6723	9.995 7231	29	20	
	50	9.145 2001	1492	9.149 4799	1522	0.850 5201	9.995 7202	30	10	
2	0	9.145 3493	1492	9.149 6321	1521	0.850 3679	9.995 7172	30	0	58
	10	9.145 4985	1491	9.149 7842	1521	0.850 2158	9.995 7142	30	50	
	20	9.145 6476	1490	9.149 9363	1521	0.850 0637	9.995 7112	29	40	
	30	9.145 7966	1490	9.150 0884	1519	0.849 9116	9.995 7083	30	30	
	40	9.145 9456	1490	9.150 2403	1520	0.849 7597	9.995 7053	30	20	
	50	9.146 0946	1489	9.150 3923	1518	0.849 6077	9.995 7023	30	10	
3	0	9.146 2435	1488	9.150 5441	1519	0.849 4559	9.995 6993	29	0	57
	10	9.146 3923	1488	9.150 6960	1517	0.849 3040	9.995 6964	30	50	
	20	9.146 5411	1488	9.150 8477	1518	0.849 1523	9.995 6934	30	40	
	30	9.146 6899	1487	9.150 9995	1516	0.849 0005	9.995 6904	30	30	
	40	9.146 8386	1486	9.151 1511	1517	0.848 8489	9.995 6874	30	20	
	50	9.146 9872	1486	9.151 3028	1515	0.848 6972	9.995 6844	29	10	
4	0	9.147 1358	1485	9.151 4543	1515	0.848 5457	9.995 6815	30	0	56
	10	9.147 2843	1485	9.151 6058	1515	0.848 3942	9.995 6785	30	50	
	20	9.147 4328	1484	9.151 7573	1514	0.848 2427	9.995 6755	30	40	
	30	9.147 5812	1484	9.151 9087	1514	0.848 0913	9.995 6725	30	30	
	40	9.147 7296	1483	9.152 0601	1513	0.847 9399	9.995 6695	30	20	
	50	9.147 8779	1483	9.152 2114	1513	0.847 7886	9.995 6665	30	10	
5	0	9.148 0262	1482	9.152 3627	1512	0.847 6373	9.995 6635	30	0	55
	10	9.148 1744	1482	9.152 5139	1512	0.847 4861	9.995 6605	29	50	
	20	9.148 3226	1481	9.152 6651	1511	0.847 3349	9.995 6576	30	40	
	30	9.148 4707	1481	9.152 8162	1510	0.847 1838	9.995 6546	30	30	
	40	9.148 6188	1480	9.152 9672	1511	0.847 0328	9.995 6516	30	20	
	50	9.148 7668	1480	9.153 1183	1509	0.846 8817	9.995 6486	30	10	
6	0	9.148 9148	1479	9.153 2692	1509	0.846 7308	9.995 6456	30	0	54
	10	9.149 0627	1479	9.153 4201	1509	0.846 5799	9.995 6426	30	50	
	20	9.149 2106	1478	9.153 5710	1508	0.846 4290	9.995 6396	30	40	
	30	9.149 3584	1477	9.153 7218	1508	0.846 2782	9.995 6366	30	30	
	40	9.149 5061	1478	9.153 8726	1507	0.846 1274	9.995 6336	30	20	
	50	9.149 6539	1476	9.154 0233	1506	0.845 9767	9.995 6306	30	10	
7	0	9.149 8015	1476	9.154 1739	1507	0.845 8261	9.995 6276	30	0	53
	10	9.149 9491	1476	9.154 3246	1505	0.845 6754	9.995 6246	30	50	
	20	9.150 0967	1475	9.154 4751	1505	0.845 5249	9.995 6216	30	40	
	30	9.150 2442	1474	9.154 6256	1505	0.845 3744	9.995 6186	30	30	
	40	9.150 3916	1474	9.154 7761	1504	0.845 2239	9.995 6156	31	20	
	50	9.150 5390	1474	9.154 9265	1504	0.845 0735	9.995 6125	30	10	
8	0	9.150 6864	1473	9.155 0769	1503	0.844 9231	9.995 6095	30	0	52
	10	9.150 8337	1472	9.155 2272	1502	0.844 7728	9.995 6065	30	50	
	20	9.150 9809	1472	9.155 3774	1502	0.844 6226	9.995 6035	30	40	
	30	9.151 1281	1472	9.155 5276	1502	0.844 4724	9.995 6005	30	30	
	40	9.151 2753	1471	9.155 6778	1501	0.844 3222	9.995 5975	30	20	
	50	9.151 4224	1470	9.155 8279	1501	0.844 1721	9.995 5945	30	10	
9	0	9.151 5694	1470	9.155 9780	1500	0.844 0220	9.995 5915	31	0	51
	10	9.151 7164	1470	9.156 1280	1500	0.843 8720	9.995 5884	30	50	
	20	9.151 8634	1469	9.156 2780	1499	0.843 7220	9.995 5854	30	40	
	30	9.152 0103	1468	9.156 4279	1498	0.843 5721	9.995 5824	30	30	
	40	9.152 1571	1468	9.156 5777	1498	0.843 4223	9.995 5794	30	20	
	50	9.152 3039	1468	9.156 7275	1498	0.843 2725	9.995 5764	30	10	
10	0	9.152 4507		9.156 8773		0.843 1227	9.995 5734		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

81°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.152 4507	1467	9.156 8773	1497	0.843 1227	9.995 5734	31	0	50
	10	9.152 5974	1466	9.157 0270	1497	0.842 9730	9.995 5703	30	50	
	20	9.152 7440	1466	9.157 1767	1496	0.842 8233	9.995 5673	30	40	
	30	9.152 8906	1465	9.157 3263	1496	0.842 6737	9.995 5643	30	30	
	40	9.153 0371	1465	9.157 4759	1495	0.842 5241	9.995 5613	31	20	
	50	9.153 1836	1465	9.157 6254	1494	0.842 3746	9.995 5582	30	10	
11	0	9.153 3301	1463	9.157 7748	1495	0.842 2252	9.995 5552	30	0	49
	10	9.153 4764	1464	9.157 9243	1493	0.842 0757	9.995 5522	31	50	
	20	9.153 6228	1463	9.158 0736	1494	0.841 9264	9.995 5491	30	40	
	30	9.153 7691	1462	9.158 2230	1492	0.841 7770	9.995 5461	30	30	
	40	9.153 9153	1462	9.158 3722	1492	0.841 6278	9.995 5431	30	20	
	50	9.154 0615	1461	9.158 5214	1492	0.841 4786	9.995 5401	31	10	
12	0	9.154 2076	1461	9.158 6706	1491	0.841 3294	9.995 5370	30	0	48
	10	9.154 3537	1461	9.158 8197	1491	0.841 1803	9.995 5340	31	50	
	20	9.154 4998	1459	9.158 9688	1490	0.841 0312	9.995 5309	30	40	
	30	9.154 6457	1460	9.159 1178	1490	0.840 8822	9.995 5279	30	30	
	40	9.154 7917	1459	9.159 2668	1489	0.840 7332	9.995 5249	31	20	
	50	9.154 9376	1458	9.159 4157	1489	0.840 5843	9.995 5218	30	10	
13	0	9.155 0834	1458	9.159 5646	1488	0.840 4354	9.995 5188	30	0	47
	10	9.155 2292	1457	9.159 7134	1488	0.840 2866	9.995 5158	31	50	
	20	9.155 3749	1457	9.159 8622	1488	0.840 1378	9.995 5127	30	40	
	30	9.155 5206	1457	9.160 0110	1486	0.839 9890	9.995 5097	31	30	
	40	9.155 6663	1455	9.160 1596	1487	0.839 8404	9.995 5066	30	20	
	50	9.155 8118	1456	9.160 3083	1486	0.839 6917	9.995 5036	31	10	
14	0	9.155 9574	1455	9.160 4569	1485	0.839 5431	9.995 5005	30	0	46
	10	9.156 1029	1454	9.160 6054	1485	0.839 3946	9.995 4975	31	50	
	20	9.156 2483	1454	9.160 7539	1484	0.839 2461	9.995 4944	30	40	
	30	9.156 3937	1453	9.160 9023	1484	0.839 0977	9.995 4914	31	30	
	40	9.156 5390	1453	9.161 0507	1483	0.838 9493	9.995 4883	30	20	
	50	9.156 6843	1453	9.161 1990	1483	0.838 8010	9.995 4853	31	10	
15	0	9.156 8296	1452	9.161 3473	1483	0.838 6527	9.995 4822	30	0	45
	10	9.156 9748	1451	9.161 4956	1482	0.838 5044	9.995 4792	31	50	
	20	9.157 1199	1451	9.161 6438	1481	0.838 3562	9.995 4761	30	40	
	30	9.157 2650	1450	9.161 7919	1481	0.838 2081	9.995 4731	31	30	
	40	9.157 4100	1450	9.161 9400	1481	0.838 0600	9.995 4700	30	20	
	50	9.157 5550	1450	9.162 0881	1480	0.837 9119	9.995 4670	31	10	
16	0	9.157 7000	1449	9.162 2361	1479	0.837 7639	9.995 4639	31	0	44
	10	9.157 8449	1448	9.162 3840	1479	0.837 6160	9.995 4608	30	50	
	20	9.157 9897	1448	9.162 5319	1479	0.837 4681	9.995 4578	31	40	
	30	9.158 1345	1447	9.162 6798	1478	0.837 3202	9.995 4547	30	30	
	40	9.158 2792	1447	9.162 8276	1478	0.837 1724	9.995 4517	31	20	
	50	9.158 4239	1447	9.162 9754	1477	0.837 0246	9.995 4486	31	10	
17	0	9.158 5686	1446	9.163 1231	1476	0.836 8769	9.995 4455	30	0	43
	10	9.158 7132	1445	9.163 2707	1476	0.836 7293	9.995 4425	31	50	
	20	9.158 8577	1445	9.163 4183	1476	0.836 5817	9.995 4394	31	40	
	30	9.159 0022	1445	9.163 5659	1475	0.836 4341	9.995 4363	30	30	
	40	9.159 1467	1444	9.163 7134	1475	0.836 2866	9.995 4333	31	20	
	50	9.159 2911	1443	9.163 8609	1474	0.836 1391	9.995 4302	31	10	
18	0	9.159 4354	1443	9.164 0083	1474	0.835 9917	9.995 4271	31	0	42
	10	9.159 5797	1443	9.164 1557	1473	0.835 8443	9.995 4240	30	50	
	20	9.159 7240	1442	9.164 3030	1473	0.835 6970	9.995 4210	31	40	
	30	9.159 8682	1442	9.164 4503	1472	0.835 5497	9.995 4179	31	30	
	40	9.160 0124	1441	9.164 5975	1472	0.835 4025	9.995 4148	31	20	
	50	9.160 1565	1440	9.164 7447	1472	0.835 2553	9.995 4117	30	10	
19	0	9.160 3005	1440	9.164 8919	1471	0.835 1081	9.995 4087	31	0	41
	10	9.160 4445	1440	9.165 0390	1470	0.834 9610	9.995 4056	31	50	
	20	9.160 5885	1439	9.165 1860	1470	0.834 8140	9.995 4025	31	40	
	30	9.160 7324	1439	9.165 3330	1469	0.834 6670	9.995 3994	31	30	
	40	9.160 8763	1438	9.165 4799	1469	0.834 5201	9.995 3963	30	20	
	50	9.161 0201	1438	9.165 6268	1469	0.834 3732	9.995 3933	31	10	
20	0	9.161 1639		9.165 7737		0.834 2263	9.995 3902		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	1500
1	150
2	300
3	450
4	600
5	750
6	900
7	1050
8	1200
9	1350

	1490
1	149
2	298
3	447
4	596
5	745
6	894
7	1043
8	1192
9	1341

	1480
1	148
2	296
3	444
4	592
5	740
6	888
7	1036
8	1184
9	1332

	1470
1	147
2	294
3	441
4	588
5	735
6	882
7	1029
8	1176
9	1323

	1460
1	146
2	292
3	438
4	584
5	730
6	876
7	1022
8	1168
9	1314

	1450
1	145
2	290
3	435
4	580
5	725
6	870
7	1015
8	1160
9	1305

	1440
1	144
2	288
3	432
4	576
5	720
6	864
7	1008
8	1152
9	1296

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1470	
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7	1029
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3	438
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5	730
6	876
7	1022
8	1168
9	1314

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1	145
2	290
3	435
4	580
5	725
6	870
7	1015
8	1160
9	1305

1440	
1	144
2	288
3	432
4	576
5	720
6	864
7	1008
8	1152
9	1296

1430	
1	143
2	286
3	429
4	572
5	715
6	858
7	1001
8	1144
9	1287

1420	
1	142
2	284
3	426
4	568
5	710
6	852
7	994
8	1136
9	1278

1410	
1	141
2	282
3	423
4	564
5	705
6	846
7	987
8	1128
9	1269

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.161 1639	1437	9.165 7737	1468	0.834 2263	9.995 3902	31	0	40
	10	9.161 3076	1437	9.165 9205	1467	0.834 0795	9.995 3871	31	50	
	20	9.161 4513	1436	9.166 0672	1467	0.833 9328	9.995 3840	31	40	
	30	9.161 5949	1435	9.166 2139	1467	0.833 7861	9.995 3809	31	30	
	40	9.161 7384	1436	9.166 3606	1466	0.833 6394	9.995 3778	31	20	
	50	9.161 8820	1434	9.166 5072	1466	0.833 4928	9.995 3747	30	10	
21	0	9.162 0254	1435	9.166 6538	1465	0.833 3462	9.995 3717	31	0	39
	10	9.162 1689	1434	9.166 8003	1465	0.833 1997	9.995 3686	31	50	
	20	9.162 3123	1433	9.166 9468	1464	0.833 0532	9.995 3655	31	40	
	30	9.162 4556	1433	9.167 0932	1464	0.832 9068	9.995 3624	31	30	
	40	9.162 5989	1432	9.167 2396	1463	0.832 7604	9.995 3593	31	20	
	50	9.162 7421	1432	9.167 3859	1463	0.832 6141	9.995 3562	31	10	
22	0	9.162 8853	1431	9.167 5322	1462	0.832 4678	9.995 3531	31	0	38
	10	9.163 0284	1431	9.167 6784	1462	0.832 3216	9.995 3500	31	50	
	20	9.163 1715	1431	9.167 8246	1462	0.832 1754	9.995 3469	31	40	
	30	9.163 3146	1429	9.167 9708	1460	0.832 0292	9.995 3438	31	30	
	40	9.163 4575	1430	9.168 1168	1461	0.831 8832	9.995 3407	31	20	
	50	9.163 6005	1429	9.168 2629	1460	0.831 7371	9.995 3376	31	10	
23	0	9.163 7434	1428	9.168 4089	1459	0.831 5911	9.995 3345	31	0	37
	10	9.163 8862	1428	9.168 5548	1459	0.831 4452	9.995 3314	31	50	
	20	9.164 0290	1428	9.168 7007	1459	0.831 2993	9.995 3283	31	40	
	30	9.164 1718	1427	9.168 8466	1458	0.831 1534	9.995 3252	31	30	
	40	9.164 3145	1427	9.168 9924	1458	0.831 0076	9.995 3221	31	20	
	50	9.164 4572	1426	9.169 1382	1457	0.830 8618	9.995 3190	31	10	
24	0	9.164 5998	1425	9.169 2839	1457	0.830 7161	9.995 3159	31	0	36
	10	9.164 7423	1425	9.169 4296	1456	0.830 5704	9.995 3128	32	50	
	20	9.164 8848	1425	9.169 5752	1456	0.830 4248	9.995 3096	31	40	
	30	9.165 0273	1424	9.169 7208	1455	0.830 2792	9.995 3065	31	30	
	40	9.165 1697	1424	9.169 8663	1455	0.830 1337	9.995 3034	31	20	
	50	9.165 3121	1423	9.170 0118	1454	0.829 9882	9.995 3003	31	10	
25	0	9.165 4544	1423	9.170 1572	1454	0.829 8428	9.995 2972	31	0	35
	10	9.165 5967	1422	9.170 3026	1454	0.829 6974	9.995 2941	31	50	
	20	9.165 7389	1422	9.170 4480	1453	0.829 5520	9.995 2910	32	40	
	30	9.165 8811	1421	9.170 5933	1452	0.829 4067	9.995 2878	31	30	
	40	9.166 0232	1421	9.170 7385	1452	0.829 2615	9.995 2847	31	20	
	50	9.166 1653	1421	9.170 8837	1452	0.829 1163	9.995 2816	31	10	
26	0	9.166 3074	1419	9.171 0289	1451	0.828 9711	9.995 2785	31	0	34
	10	9.166 4493	1420	9.171 1740	1451	0.828 8260	9.995 2754	32	50	
	20	9.166 5913	1419	9.171 3191	1450	0.828 6809	9.995 2722	31	40	
	30	9.166 7332	1418	9.171 4641	1449	0.828 5359	9.995 2691	31	30	
	40	9.166 8750	1418	9.171 6090	1450	0.828 3910	9.995 2660	31	20	
	50	9.167 0168	1418	9.171 7540	1449	0.828 2460	9.995 2629	32	10	
27	0	9.167 1586	1417	9.171 8989	1448	0.828 1011	9.995 2597	31	0	33
	10	9.167 3003	1416	9.172 0437	1448	0.827 9563	9.995 2566	31	50	
	20	9.167 4419	1417	9.172 1885	1447	0.827 8115	9.995 2535	32	40	
	30	9.167 5836	1415	9.172 3332	1447	0.827 6668	9.995 2503	31	30	
	40	9.167 7251	1415	9.172 4779	1447	0.827 5221	9.995 2472	31	20	
	50	9.167 8666	1415	9.172 6226	1446	0.827 3774	9.995 2441	32	10	
28	0	9.168 0081	1414	9.172 7672	1445	0.827 2328	9.995 2409	31	0	32
	10	9.168 1495	1414	9.172 9117	1445	0.827 0883	9.995 2378	31	50	
	20	9.168 2909	1413	9.173 0562	1445	0.826 9438	9.995 2347	32	40	
	30	9.168 4322	1413	9.173 2007	1444	0.826 7993	9.995 2315	31	30	
	40	9.168 5735	1413	9.173 3451	1444	0.826 6549	9.995 2284	31	20	
	50	9.168 7148	1411	9.173 4895	1443	0.826 5105	9.995 2253	32	10	
29	0	9.168 8559	1412	9.173 6338	1443	0.826 3662	9.995 2221	31	0	31
	10	9.168 9971	1411	9.173 7781	1442	0.826 2219	9.995 2190	32	50	
	20	9.169 1382	1410	9.173 9223	1442	0.826 0777	9.995 2158	31	40	
	30	9.169 2792	1410	9.174 0665	1442	0.825 9335	9.995 2127	32	30	
	40	9.169 4202	1410	9.174 2107	1441	0.825 7893	9.995 2095	31	20	
	50	9.169 5612	1409	9.174 3548	1440	0.825 6452	9.995 2064	31	10	
30	0	9.169 7021		9.174 4988		0.825 5012	9.995 2033		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

81°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.169 7021	1408	9.174 4988	1440	0.825 5012	9.995 2033	32	0	30
	10	9.169 8429	1409	9.174 6428	1440	0.825 3572	9.995 2001	31	50	
	20	9.169 9838	1407	9.174 7868	1439	0.825 2132	9.995 1970	32	40	
	30	9.170 1245	1407	9.174 9307	1439	0.825 0693	9.995 1938	31	30	
	40	9.170 2652	1407	9.175 0746	1438	0.824 9254	9.995 1907	32	20	
	50	9.170 4059	1406	9.175 2184	1438	0.824 7816	9.995 1875	31	10	
31	0	9.170 5465	1406	9.175 3622	1437	0.824 6378	9.995 1844	32	0	29
	10	9.170 6871	1406	9.175 5059	1437	0.824 4941	9.995 1812	31	50	
	20	9.170 8277	1405	9.175 6496	1437	0.824 3504	9.995 1781	32	40	
	30	9.170 9682	1404	9.175 7933	1436	0.824 2067	9.995 1749	32	30	
	40	9.171 1086	1404	9.175 9369	1435	0.824 0631	9.995 1717	31	20	
	50	9.171 2490	1403	9.176 0804	1435	0.823 9196	9.995 1686	32	10	
32	0	9.171 3893	1403	9.176 2239	1435	0.823 7761	9.995 1654	31	0	28
	10	9.171 5296	1403	9.176 3674	1434	0.823 6326	9.995 1623	32	50	
	20	9.171 6699	1402	9.176 5108	1434	0.823 4892	9.995 1591	32	40	
	30	9.171 8101	1402	9.176 6542	1433	0.823 3458	9.995 1559	31	30	
	40	9.171 9503	1401	9.176 7975	1433	0.823 2025	9.995 1528	32	20	
	50	9.172 0904	1401	9.176 9408	1432	0.823 0592	9.995 1496	32	10	
33	0	9.172 2305	1400	9.177 0840	1432	0.822 9160	9.995 1464	31	0	27
	10	9.172 3705	1400	9.177 2272	1431	0.822 7728	9.995 1433	32	50	
	20	9.172 5105	1399	9.177 3703	1431	0.822 6297	9.995 1401	32	40	
	30	9.172 6504	1399	9.177 5134	1431	0.822 4866	9.995 1369	31	30	
	40	9.172 7903	1398	9.177 6565	1430	0.822 3435	9.995 1338	32	20	
	50	9.172 9301	1398	9.177 7995	1430	0.822 2005	9.995 1306	32	10	
34	0	9.173 0699	1398	9.177 9425	1429	0.822 0575	9.995 1274	31	0	26
	10	9.173 2097	1397	9.178 0854	1429	0.821 9146	9.995 1243	32	50	
	20	9.173 3494	1396	9.178 2283	1428	0.821 7717	9.995 1211	32	40	
	30	9.173 4890	1396	9.178 3711	1428	0.821 6289	9.995 1179	32	30	
	40	9.173 6286	1396	9.178 5139	1427	0.821 4861	9.995 1147	31	20	
	50	9.173 7682	1395	9.178 6566	1427	0.821 3434	9.995 1116	32	10	
35	0	9.173 9077	1395	9.178 7993	1427	0.821 2007	9.995 1084	32	0	25
	10	9.174 0472	1394	9.178 9420	1426	0.821 0580	9.995 1052	32	50	
	20	9.174 1866	1394	9.179 0846	1425	0.820 9154	9.995 1020	32	40	
	30	9.174 3260	1393	9.179 2271	1426	0.820 7729	9.995 0988	31	30	
	40	9.174 4653	1393	9.179 3697	1424	0.820 6303	9.995 0957	32	20	
	50	9.174 6046	1393	9.179 5121	1425	0.820 4879	9.995 0925	32	10	
36	0	9.174 7439	1392	9.179 6546	1423	0.820 3454	9.995 0893	32	0	24
	10	9.174 8831	1391	9.179 7969	1424	0.820 2031	9.995 0861	32	50	
	20	9.175 0222	1391	9.179 9393	1423	0.820 0607	9.995 0829	32	40	
	30	9.175 1613	1391	9.180 0816	1422	0.819 9184	9.995 0797	31	30	
	40	9.175 3004	1390	9.180 2238	1422	0.819 7762	9.995 0766	32	20	
	50	9.175 4394	1390	9.180 3660	1422	0.819 6340	9.995 0734	32	10	
37	0	9.175 5784	1389	9.180 5082	1421	0.819 4918	9.995 0702	32	0	23
	10	9.175 7173	1389	9.180 6503	1421	0.819 3497	9.995 0670	32	50	
	20	9.175 8562	1388	9.180 7924	1420	0.819 2076	9.995 0638	32	40	
	30	9.175 9950	1388	9.180 9344	1420	0.819 0656	9.995 0606	32	30	
	40	9.176 1338	1387	9.181 0764	1419	0.818 9236	9.995 0574	32	20	
	50	9.176 2725	1387	9.181 2183	1419	0.818 7817	9.995 0542	32	10	
38	0	9.176 4112	1387	9.181 3602	1419	0.818 6398	9.995 0510	32	0	22
	10	9.176 5499	1386	9.181 5021	1418	0.818 4979	9.995 0478	32	50	
	20	9.176 6885	1385	9.181 6439	1417	0.818 3561	9.995 0446	32	40	
	30	9.176 8270	1386	9.181 7856	1417	0.818 2144	9.995 0414	32	30	
	40	9.176 9656	1384	9.181 9273	1417	0.818 0727	9.995 0382	32	20	
	50	9.177 1040	1385	9.182 0690	1416	0.817 9310	9.995 0350	32	10	
39	0	9.177 2425	1383	9.182 2106	1416	0.817 7894	9.995 0318	32	0	21
	10	9.177 3808	1384	9.182 3522	1416	0.817 6478	9.995 0286	32	50	
	20	9.177 5192	1383	9.182 4938	1415	0.817 5062	9.995 0254	32	40	
	30	9.177 6575	1382	9.182 6353	1414	0.817 3647	9.995 0222	32	30	
	40	9.177 7957	1382	9.182 7767	1414	0.817 2233	9.995 0190	32	20	
	50	9.177 9339	1382	9.182 9181	1414	0.817 0819	9.995 0158	32	10	
40	0	9.178 0721		9.183 0595		0.816 9405	9.995 0126		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

1440	
1	144
2	288
3	432
4	576
5	720
6	864
7	1008
8	1152
9	1296

1430	
1	143
2	286
3	429
4	572
5	715
6	858
7	1001
8	1144
9	1287

1420	
1	142
2	284
3	426
4	568
5	710
6	852
7	994
8	1136
9	1278

1410	
1	141
2	282
3	423
4	564
5	705
6	846
7	987
8	1128
9	1269

1400	
1	140
2	280
3	420
4	560
5	700
6	840
7	980
8	1120
9	1260

1390	
1	139
2	278
3	417
4	556
5	695
6	834
7	973
8	1112
9	1251

1380	
1	138
2	276
3	414
4	552
5	690
6	828
7	966
8	1104
9	1242

8°

1410

1	141
2	282
3	423
4	564
5	705
6	846
7	987
8	1128
9	1269

1400

1	140
2	280
3	420
4	560
5	700
6	840
7	980
8	1120
9	1260

1390

1	139
2	278
3	417
4	556
5	695
6	834
7	973
8	1112
9	1251

1380

1	138
2	276
3	414
4	552
5	690
6	828
7	966
8	1104
9	1242

1370

1	137
2	274
3	411
4	548
5	685
6	822
7	959
8	1096
9	1233

1360

1	136
2	272
3	408
4	544
5	680
6	816
7	952
8	1088
9	1224

1350

1	135
2	270
3	405
4	540
5	675
6	810
7	945
8	1080
9	1215

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.178 0721	1381	9.183 0595	1413	0.816 9405	9.995 0126	32	0	20
	10	9.178 2102	1381	9.183 2008	1413	0.816 7992	9.995 0094	32	50	
	20	9.178 3483	1380	9.183 3421	1412	0.816 6579	9.995 0062	33	40	
	30	9.178 4863	1380	9.183 4833	1412	0.816 5167	9.995 0029	32	30	
	40	9.178 6243	1379	9.183 6245	1412	0.816 3755	9.994 9997	32	20	
	50	9.178 7622	1379	9.183 7657	1411	0.816 2343	9.994 9965	32	10	
41	0	9.178 9001	1378	9.183 9068	1410	0.816 0932	9.994 9933	32	0	19
	10	9.179 0379	1378	9.184 0478	1410	0.815 9522	9.994 9901	32	50	
	20	9.179 1757	1378	9.184 1888	1410	0.815 8112	9.994 9869	33	40	
	30	9.179 3135	1377	9.184 3298	1409	0.815 6702	9.994 9836	32	30	
	40	9.179 4512	1376	9.184 4707	1409	0.815 5293	9.994 9804	32	20	
	50	9.179 5888	1377	9.184 6116	1409	0.815 3884	9.994 9772	32	10	
42	0	9.179 7265	1375	9.184 7525	1408	0.815 2475	9.994 9740	32	0	18
	10	9.179 8640	1376	9.184 8933	1407	0.815 1067	9.994 9708	33	50	
	20	9.180 0016	1374	9.185 0340	1407	0.814 9660	9.994 9675	32	40	
	30	9.180 1390	1375	9.185 1747	1407	0.814 8253	9.994 9643	32	30	
	40	9.180 2765	1374	9.185 3154	1406	0.814 6846	9.994 9611	32	20	
	50	9.180 4139	1373	9.185 4560	1406	0.814 5440	9.994 9579	33	10	
43	0	9.180 5512	1373	9.185 5966	1405	0.814 4034	9.994 9546	32	0	17
	10	9.180 6885	1373	9.185 7371	1405	0.814 2629	9.994 9514	32	50	
	20	9.180 8258	1372	9.185 8776	1405	0.814 1224	9.994 9482	33	40	
	30	9.180 9630	1372	9.186 0181	1404	0.813 9819	9.994 9449	32	30	
	40	9.181 1002	1371	9.186 1585	1403	0.813 8415	9.994 9417	32	20	
	50	9.181 2373	1371	9.186 2988	1404	0.813 7012	9.994 9385	33	10	
44	0	9.181 3744	1370	9.186 4392	1402	0.813 5608	9.994 9352	32	0	16
	10	9.181 5114	1370	9.186 5794	1403	0.813 4206	9.994 9320	32	50	
	20	9.181 6484	1370	9.186 7197	1402	0.813 2803	9.994 9288	33	40	
	30	9.181 7854	1369	9.186 8599	1401	0.813 1401	9.994 9255	32	30	
	40	9.181 9223	1369	9.187 0000	1401	0.813 0000	9.994 9223	32	20	
	50	9.182 0592	1368	9.187 1401	1401	0.812 8599	9.994 9191	33	10	
45	0	9.182 1960	1368	9.187 2802	1400	0.812 7198	9.994 9158	32	0	15
	10	9.182 3328	1367	9.187 4202	1400	0.812 5798	9.994 9126	33	50	
	20	9.182 4695	1367	9.187 5602	1399	0.812 4398	9.994 9093	32	40	
	30	9.182 6062	1366	9.187 7001	1399	0.812 2999	9.994 9061	32	30	
	40	9.182 7428	1366	9.187 8400	1398	0.812 1600	9.994 9029	33	20	
	50	9.182 8794	1366	9.187 9798	1398	0.812 0202	9.994 8996	32	10	
46	0	9.183 0160	1365	9.188 1196	1398	0.811 8804	9.994 8964	33	0	14
	10	9.183 1525	1365	9.188 2594	1397	0.811 7406	9.994 8931	32	50	
	20	9.183 2890	1364	9.188 3991	1397	0.811 6009	9.994 8899	33	40	
	30	9.183 4254	1364	9.188 5388	1396	0.811 4612	9.994 8866	32	30	
	40	9.183 5618	1363	9.188 6784	1396	0.811 3216	9.994 8834	33	20	
	50	9.183 6981	1363	9.188 8180	1395	0.811 1820	9.994 8801	32	10	
47	0	9.183 8344	1362	9.188 9575	1395	0.811 0425	9.994 8769	33	0	13
	10	9.183 9706	1362	9.189 0970	1395	0.810 9030	9.994 8736	32	50	
	20	9.184 1068	1362	9.189 2365	1394	0.810 7635	9.994 8704	33	40	
	30	9.184 2430	1361	9.189 3759	1394	0.810 6241	9.994 8671	33	30	
	40	9.184 3791	1361	9.189 5153	1393	0.810 4847	9.994 8638	32	20	
	50	9.184 5152	1360	9.189 6546	1393	0.810 3454	9.994 8606	33	10	
48	0	9.184 6512	1360	9.189 7939	1392	0.810 2061	9.994 8573	32	0	12
	10	9.184 7872	1360	9.189 9331	1393	0.810 0669	9.994 8541	33	50	
	20	9.184 9232	1359	9.190 0724	1391	0.809 9276	9.994 8508	33	40	
	30	9.185 0591	1358	9.190 2115	1391	0.809 7885	9.994 8475	32	30	
	40	9.185 1949	1358	9.190 3506	1391	0.809 6494	9.994 8443	33	20	
	50	9.185 3307	1358	9.190 4897	1390	0.809 5103	9.994 8410	33	10	
49	0	9.185 4665	1357	9.190 6287	1390	0.809 3713	9.994 8377	32	0	11
	10	9.185 6022	1357	9.190 7677	1390	0.809 2323	9.994 8345	33	50	
	20	9.185 7379	1356	9.190 9067	1389	0.809 0933	9.994 8312	33	40	
	30	9.185 8735	1356	9.191 0456	1389	0.808 9544	9.994 8279	32	30	
	40	9.186 0091	1356	9.191 1845	1388	0.808 8155	9.994 8247	33	20	
	50	9.186 1447	1355	9.191 3233	1388	0.808 6767	9.994 8214	33	10	
50	0	9.186 2802		9.191 4621		0.808 5379	9.994 8181		0	10
′	″	Cos	d.	Cotg	d.	Tang	Sin	d.	″	′

81°

8°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.186 2802	1355	9.191 4621	1387	0.808 5379	9.994 8181	32	0	10
	10	9.186 4157	1354	9.191 6008	1387	0.808 3992	9.994 8149	33	50	
	20	9.186 5511	1354	9.191 7395	1386	0.808 2605	9.994 8116	33	40	
	30	9.186 6865	1353	9.191 8781	1387	0.808 1219	9.994 8083	33	30	
	40	9.186 8218	1353	9.192 0168	1385	0.807 9832	9.994 8050	32	20	
	50	9.186 9571	1352	9.192 1553	1386	0.807 8447	9.994 8018	33	10	
51	0	9.187 0923	1352	9.192 2939	1384	0.807 7061	9.994 7985	33	0	9
	10	9.187 2275	1352	9.192 4323	1385	0.807 5677	9.994 7952	33	50	
	20	9.187 3627	1351	9.192 5708	1384	0.807 4292	9.994 7919	33	40	
	30	9.187 4978	1351	9.192 7092	1383	0.807 2908	9.994 7886	32	30	
	40	9.187 6329	1350	9.192 8475	1384	0.807 1525	9.994 7854	33	20	
	50	9.187 7679	1350	9.192 9859	1382	0.807 0141	9.994 7821	33	10	
52	0	9.187 9029	1350	9.193 1241	1383	0.806 8759	9.994 7788	33	0	8
	10	9.188 0379	1349	9.193 2624	1382	0.806 7376	9.994 7755	33	50	
	20	9.188 1728	1348	9.193 4006	1381	0.806 5994	9.994 7722	33	40	
	30	9.188 3076	1349	9.193 5387	1381	0.806 4613	9.994 7689	33	30	
	40	9.188 4425	1347	9.193 6768	1381	0.806 3232	9.994 7656	32	20	
	50	9.188 5772	1348	9.193 8149	1380	0.806 1851	9.994 7624	33	10	
53	0	9.188 7120	1347	9.193 9529	1380	0.806 0471	9.994 7591	33	0	7
	10	9.188 8467	1346	9.194 0909	1379	0.805 9091	9.994 7558	33	50	
	20	9.188 9813	1346	9.194 2288	1379	0.805 7712	9.994 7525	33	40	
	30	9.189 1159	1346	9.194 3667	1379	0.805 6333	9.994 7492	33	30	
	40	9.189 2505	1345	9.194 5046	1378	0.805 4954	9.994 7459	33	20	
	50	9.189 3850	1345	9.194 6424	1378	0.805 3576	9.994 7426	33	10	
54	0	9.189 5195	1344	9.194 7802	1377	0.805 2198	9.994 7393	33	0	6
	10	9.189 6539	1344	9.194 9179	1377	0.805 0821	9.994 7360	33	50	
	20	9.189 7883	1343	9.195 0556	1376	0.804 9444	9.994 7327	33	40	
	30	9.189 9226	1344	9.195 1932	1376	0.804 8068	9.994 7294	33	30	
	40	9.190 0570	1342	9.195 3308	1376	0.804 6692	9.994 7261	33	20	
	50	9.190 1912	1342	9.195 4684	1375	0.804 5316	9.994 7228	33	10	
55	0	9.190 3254	1342	9.195 6059	1375	0.804 3941	9.994 7195	33	0	5
	10	9.190 4596	1342	9.195 7434	1375	0.804 2566	9.994 7162	33	50	
	20	9.190 5938	1340	9.195 8809	1374	0.804 1191	9.994 7129	33	40	
	30	9.190 7278	1341	9.196 0183	1373	0.803 9817	9.994 7096	33	30	
	40	9.190 8619	1340	9.196 1556	1373	0.803 8444	9.994 7063	33	20	
	50	9.190 9959	1340	9.196 2929	1373	0.803 7071	9.994 7030	33	10	
56	0	9.191 1299	1339	9.196 4302	1372	0.803 5698	9.994 6997	33	0	4
	10	9.191 2638	1339	9.196 5674	1372	0.803 4326	9.994 6964	34	50	
	20	9.191 3977	1338	9.196 7046	1372	0.803 2954	9.994 6930	33	40	
	30	9.191 5315	1338	9.196 8418	1371	0.803 1582	9.994 6897	33	30	
	40	9.191 6653	1338	9.196 9789	1371	0.803 0211	9.994 6864	33	20	
	50	9.191 7991	1337	9.197 1160	1370	0.802 8840	9.994 6831	33	10	
57	0	9.191 9328	1337	9.197 2530	1370	0.802 7470	9.994 6798	33	0	3
	10	9.192 0665	1336	9.197 3900	1369	0.802 6100	9.994 6765	33	50	
	20	9.192 2001	1336	9.197 5269	1369	0.802 4731	9.994 6732	34	40	
	30	9.192 3337	1335	9.197 6638	1369	0.802 3362	9.994 6698	33	30	
	40	9.192 4672	1335	9.197 8007	1368	0.802 1993	9.994 6665	33	20	
	50	9.192 6007	1335	9.197 9375	1368	0.802 0625	9.994 6632	33	10	
58	0	9.192 7342	1334	9.198 0743	1368	0.801 9257	9.994 6599	34	0	2
	10	9.192 8676	1334	9.198 2111	1367	0.801 7889	9.994 6565	33	50	
	20	9.193 0010	1333	9.198 3478	1366	0.801 6522	9.994 6532	33	40	
	30	9.193 1343	1333	9.198 4844	1366	0.801 5156	9.994 6499	33	30	
	40	9.193 2676	1333	9.198 6210	1366	0.801 3790	9.994 6466	34	20	
	50	9.193 4009	1332	9.198 7576	1365	0.801 2424	9.994 6432	33	10	
59	0	9.193 5341	1331	9.198 8941	1365	0.801 1059	9.994 6399	33	0	1
	10	9.193 6672	1332	9.199 0306	1365	0.800 9694	9.994 6366	33	50	
	20	9.193 8004	1330	9.199 1671	1364	0.800 8329	9.994 6333	34	40	
	30	9.193 9334	1331	9.199 3035	1364	0.800 6965	9.994 6299	33	30	
	40	9.194 0665	1330	9.199 4399	1363	0.800 5601	9.994 6266	33	20	
	50	9.194 1995	1329	9.199 5762	1363	0.800 4238	9.994 6233	34	10	
60	0	9.194 3324		9.199 7125		0.800 2875	9.994 6199		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

81°

	1390	1380	1370	1360	1350	1340	1330
1	139	138	137	136	135	134	133
2	278	276	274	272	270	268	266
3	417	414	411	408	405	402	399
4	556	552	548	544	540	536	532
5	695	690	685	680	675	670	665
6	834	828	822	816	810	804	798
7	973	966	959	952	945	938	931
8	1112	1104	1096	1088	1080	1072	1064
9	1251	1242	1233	1224	1215	1206	1197

9°

1360	
1	136
2	272
3	408
4	544
5	680
6	816
7	952
8	1088
9	1224

1350	
1	135
2	270
3	405
4	540
5	675
6	810
7	945
8	1080
9	1215

1340	
1	134
2	268
3	402
4	536
5	670
6	804
7	938
8	1072
9	1206

1330	
1	133
2	266
3	399
4	532
5	665
6	798
7	931
8	1064
9	1197

1320	
1	132
2	264
3	396
4	528
5	660
6	792
7	924
8	1056
9	1188

1310	
1	131
2	262
3	393
4	524
5	655
6	786
7	917
8	1048
0	1179

1300	
1	130
2	260
3	390
4	520
5	650
6	780
7	910
8	1040
9	1170

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.194 3324	1330	9.199 7125	1363	0.800 2875	9.994 6199	33	0	60
	10	9.194 4654	1328	9.199 8488	1362	0.800 1512	9.994 6166	33	50	
	20	9.194 5982	1329	9.199 9850	1361	0.800 0150	9.994 6133	34	40	
	30	9.194 7311	1328	9.200 1211	1362	0.799 8789	9.994 6099	33	30	
	40	9.194 8639	1327	9.200 2573	1361	0.799 7427	9.994 6066	34	20	
	50	9.194 9966	1327	9.200 3934	1360	0.799 6066	9.994 6032	33	10	
1	0	9.195 1293	1327	9.200 5294	1360	0.799 4706	9.994 5999	33	0	59
	10	9.195 2620	1326	9.200 6654	1360	0.799 3346	9.994 5966	34	50	
	20	9.195 3946	1326	9.200 8014	1359	0.799 1986	9.994 5932	33	40	
	30	9.195 5272	1325	9.200 9373	1359	0.799 0627	9.994 5899	34	30	
	40	9.195 6597	1325	9.201 0732	1359	0.798 9268	9.994 5865	33	20	
	50	9.195 7922	1325	9.201 2091	1358	0.798 7909	9.994 5832	34	10	
2	0	9.195 9247	1324	9.201 3449	1357	0.798 6551	9.994 5798	33	0	58
	10	9.196 0571	1324	9.201 4806	1357	0.798 5194	9.994 5765	34	50	
	20	9.196 1895	1323	9.201 6163	1357	0.798 3837	9.994 5731	33	40	
	30	9.196 3218	1323	9.201 7520	1357	0.798 2480	9.994 5698	34	30	
	40	9.196 4541	1323	9.201 8877	1356	0.798 1123	9.994 5664	33	20	
	50	9.196 5864	1322	9.202 0233	1355	0.797 9767	9.994 5631	34	10	
3	0	9.196 7186	1321	9.202 1588	1356	0.797 8412	9.994 5597	33	0	57
	10	9.196 8507	1322	9.202 2944	1355	0.797 7056	9.994 5564	34	50	
	20	9.196 9829	1321	9.202 4299	1354	0.797 5701	9.994 5530	33	40	
	30	9.197 1150	1320	9.202 5653	1354	0.797 4347	9.994 5497	34	30	
	40	9.197 2470	1320	9.202 7007	1354	0.797 2993	9.994 5463	34	20	
	50	9.197 3790	1320	9.202 8361	1353	0.797 1639	9.994 5429	33	10	
4	0	9.197 5110	1319	9.202 9714	1353	0.797 0286	9.994 5396	34	0	56
	10	9.197 6429	1319	9.203 1067	1352	0.796 8933	9.994 5362	33	50	
	20	9.197 7748	1318	9.203 2419	1352	0.796 7581	9.994 5329	34	40	
	30	9.197 9066	1318	9.203 3771	1352	0.796 6229	9.994 5295	34	30	
	40	9.198 0384	1318	9.203 5123	1351	0.796 4877	9.994 5261	33	20	
	50	9.198 1702	1317	9.203 6474	1351	0.796 3526	9.994 5228	34	10	
5	0	9.198 3019	1317	9.203 7825	1350	0.796 2175	9.994 5194	34	0	55
	10	9.198 4336	1316	9.203 9175	1350	0.796 0825	9.994 5160	33	50	
	20	9.198 5652	1316	9.204 0525	1350	0.795 9475	9.994 5127	34	40	
	30	9.198 6968	1316	9.204 1875	1349	0.795 8125	9.994 5093	34	30	
	40	9.198 8284	1315	9.204 3224	1349	0.795 6776	9.994 5059	33	20	
	50	9.198 9599	1314	9.204 4573	1349	0.795 5427	9.994 5026	34	10	
6	0	9.199 0913	1315	9.204 5922	1348	0.795 4078	9.994 4992	34	0	54
	10	9.199 2228	1314	9.204 7270	1347	0.795 2730	9.994 4958	34	50	
	20	9.199 3542	1313	9.204 8617	1347	0.795 1383	9.994 4924	33	40	
	30	9.199 4855	1313	9.204 9964	1347	0.795 0036	9.994 4891	34	30	
	40	9.199 6168	1313	9.205 1311	1347	0.794 8689	9.994 4857	34	20	
	50	9.199 7481	1312	9.205 2658	1346	0.794 7342	9.994 4823	34	10	
7	0	9.199 8793	1312	9.205 4004	1346	0.794 5996	9.994 4789	33	0	53
	10	9.200 0105	1312	9.205 5350	1345	0.794 4650	9.994 4756	34	50	
	20	9.200 1417	1311	9.205 6695	1345	0.794 3305	9.994 4722	34	40	
	30	9.200 2728	1310	9.205 8040	1344	0.794 1960	9.994 4688	34	30	
	40	9.200 4038	1311	9.205 9384	1344	0.794 0616	9.994 4654	34	20	
	50	9.200 5349	1309	9.206 0728	1344	0.793 9272	9.994 4620	33	10	
8	0	9.200 6658	1310	9.206 2072	1343	0.793 7928	9.994 4587	34	0	52
	10	9.200 7968	1309	9.206 3415	1343	0.793 6585	9.994 4553	34	50	
	20	9.200 9277	1309	9.206 4758	1343	0.793 5242	9.994 4519	34	40	
	30	9.201 0586	1308	9.206 6101	1342	0.793 3899	9.994 4485	34	30	
	40	9.201 1894	1308	9.206 7443	1341	0.793 2557	9.994 4451	34	20	
	50	9.201 3202	1307	9.206 8784	1342	0.793 1216	9.994 4417	34	10	
9	0	9.201 4509	1307	9.207 0126	1341	0.792 9874	9.994 4383	34	0	51
	10	9.201 5816	1307	9.207 1467	1340	0.792 8533	9.994 4349	34	50	
	20	9.201 7123	1306	9.207 2807	1340	0.792 7193	9.994 4315	34	40	
	30	9.201 8429	1306	9.207 4147	1340	0.792 5853	9.994 4281	34	30	
	40	9.201 9735	1305	9.207 5487	1339	0.792 4513	9.994 4247	33	20	
	50	9.202 1040	1305	9.207 6826	1339	0.792 3174	9.994 4214	34	10	
10	0	9.202 2345		9.207 8165		0.792 1835	9.994 4180		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

80°

9°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.202 2345		9.207 8165		0.792 1835	9.994 4180		0	50
	10	9.202 3650	1305	9.207 9504	1339	0.792 0496	9.994 4146	34	50	
	20	9.202 4954	1304	9.208 0842	1338	0.791 9158	9.994 4112	34	40	
	30	9.202 6258	1304	9.208 2180	1338	0.791 7820	9.994 4078	34	30	
	40	9.202 7561	1303	9.208 3517	1337	0.791 6483	9.994 4044	34	20	
	50	9.202 8864	1303	9.208 4854	1337	0.791 5146	9.994 4010	34	10	
11	0	9.203 0167	1303	9.208 6191	1337	0.791 3809	9.994 3975	35	0	49
	10	9.203 1469	1302	9.208 7527	1336	0.791 2473	9.994 3941	34	50	
	20	9.203 2771	1302	9.208 8863	1336	0.791 1137	9.994 3907	34	40	
	30	9.203 4072	1301	9.209 0199	1336	0.790 9801	9.994 3873	34	30	
	40	9.203 5373	1301	9.209 1534	1335	0.790 8466	9.994 3839	34	20	
	50	9.203 6673	1300	9.209 2868	1334	0.790 7132	9.994 3805	34	10	
12	0	9.203 7974	1301	9.209 4203	1335	0.790 5797	9.994 3771	34	0	48
	10	9.203 9273	1299	9.209 5536	1333	0.790 4464	9.994 3737	34	50	
	20	9.204 0573	1300	9.209 6870	1334	0.790 3130	9.994 3703	34	40	
	30	9.204 1872	1299	9.209 8203	1333	0.790 1797	9.994 3669	34	30	
	40	9.204 3170	1298	9.209 9536	1333	0.790 0464	9.994 3635	34	20	
	50	9.204 4469	1299	9.210 0868	1332	0.789 9132	9.994 3600	35	10	
13	0	9.204 5766	1297	9.210 2200	1332	0.789 7800	9.994 3566	34	0	47
	10	9.204 7064	1298	9.210 3532	1332	0.789 6468	9.994 3532	34	50	
	20	9.204 8361	1297	9.210 4863	1331	0.789 5137	9.994 3498	34	40	
	30	9.204 9657	1296	9.210 6194	1331	0.789 3806	9.994 3464	34	30	
	40	9.205 0954	1297	9.210 7524	1330	0.789 2476	9.994 3430	34	20	
	50	9.205 2249	1295	9.210 8854	1330	0.789 1146	9.994 3395	35	10	
14	0	9.205 3545	1296	9.211 0184	1330	0.788 9816	9.994 3361	34	0	46
	10	9.205 4840	1295	9.211 1513	1329	0.788 8487	9.994 3327	34	50	
	20	9.205 6134	1294	9.211 2842	1329	0.788 7158	9.994 3293	34	40	
	30	9.205 7429	1295	9.211 4170	1328	0.788 5830	9.994 3258	35	30	
	40	9.205 8722	1293	9.211 5498	1328	0.788 4502	9.994 3224	34	20	
	50	9.206 0016	1294	9.211 6826	1328	0.788 3174	9.994 3190	34	10	
15	0	9.206 1309	1293	9.211 8153	1327	0.788 1847	9.994 3156	34	0	45
	10	9.206 2602	1293	9.211 9480	1327	0.788 0520	9.994 3121	35	50	
	20	9.206 3894	1292	9.212 0807	1327	0.787 9193	9.994 3087	34	40	
	30	9.206 5186	1292	9.212 2133	1326	0.787 7867	9.994 3053	34	30	
	40	9.206 6477	1291	9.212 3459	1326	0.787 6541	9.994 3018	35	20	
	50	9.206 7768	1291	9.212 4784	1325	0.787 5216	9.994 2984	34	10	
16	0	9.206 9059	1291	9.212 6109	1325	0.787 3891	9.994 2950	34	0	44
	10	9.207 0349	1290	9.212 7434	1325	0.787 2566	9.994 2915	35	50	
	20	9.207 1639	1290	9.212 8758	1324	0.787 1242	9.994 2881	34	40	
	30	9.207 2929	1290	9.213 0082	1324	0.786 9918	9.994 2846	35	30	
	40	9.207 4218	1289	9.213 1406	1324	0.786 8594	9.994 2812	34	20	
	50	9.207 5506	1288	9.213 2729	1323	0.786 7271	9.994 2778	34	10	
17	0	9.207 6795	1289	9.213 4051	1322	0.786 5949	9.994 2743	35	0	43
	10	9.207 8083	1288	9.213 5374	1323	0.786 4626	9.994 2709	34	50	
	20	9.207 9370	1287	9.213 6696	1322	0.786 3304	9.994 2674	35	40	
	30	9.208 0657	1287	9.213 8017	1321	0.786 1983	9.994 2640	34	30	
	40	9.208 1944	1287	9.213 9338	1321	0.786 0662	9.994 2606	34	20	
	50	9.208 3230	1286	9.214 0659	1321	0.785 9341	9.994 2571	35	10	
18	0	9.208 4516	1286	9.214 1980	1321	0.785 8020	9.994 2537	34	0	42
	10	9.208 5802	1286	9.214 3300	1320	0.785 6700	9.994 2502	35	50	
	20	9.208 7087	1285	9.214 4619	1319	0.785 5381	9.994 2468	34	40	
	30	9.208 8372	1285	9.214 5939	1320	0.785 4061	9.994 2433	35	30	
	40	9.208 9656	1284	9.214 7258	1319	0.785 2742	9.994 2399	34	20	
	50	9.209 0940	1284	9.214 8576	1318	0.785 1424	9.994 2364	35	10	
19	0	9.209 2224	1284	9.214 9894	1318	0.785 0106	9.994 2330	34	0	41
	10	9.209 3507	1283	9.215 1212	1318	0.784 8788	9.994 2295	35	50	
	20	9.209 4790	1283	9.215 2529	1317	0.784 7471	9.994 2260	35	40	
	30	9.209 6072	1282	9.215 3846	1317	0.784 6154	9.994 2226	34	30	
	40	9.209 7354	1282	9.215 5163	1317	0.784 4837	9.994 2191	35	20	
	50	9.209 8636	1282	9.215 6479	1316	0.784 3521	9.994 2157	34	10	
20	0	9.209 9917	1281	9.215 7795	1316	0.784 2205	9.994 2122	35	0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

80°

	1340
1	134
2	268
3	402
4	536
5	670
6	804
7	938
8	1072
9	1206

	1330
1	133
2	266
3	399
4	532
5	665
6	798
7	931
8	1064
9	1197

	1320
1	132
2	264
3	396
4	528
5	660
6	792
7	924
8	1056
9	1188

	1310
1	131
2	262
3	393
4	524
5	655
6	786
7	917
8	1048
9	1179

	1300
1	130
2	260
3	390
4	520
5	650
6	780
7	910
8	1040
9	1170

	1290
1	129
2	258
3	387
4	516
5	645
6	774
7	903
8	1032
9	1161

	1280
1	128
2	256
3	384
4	512
5	640
6	768
7	896
8	1024
9	1152

9°

1320		1310		1300		1290		1280		1270		1260	
1	132	1	131	1	130	1	129	1	128	1	127	1	126
2	264	2	262	2	260	2	258	2	256	2	254	2	252
3	396	3	393	3	390	3	387	3	384	3	381	3	378
4	528	4	524	4	520	4	516	4	512	4	508	4	504
5	660	5	655	5	650	5	645	5	640	5	635	5	630
6	792	6	786	6	780	6	774	6	768	6	762	6	756
7	924	7	917	7	910	7	903	7	896	7	889	7	882
8	1056	8	1048	8	1040	8	1032	8	1024	8	1016	8	1008
9	1188	9	1179	9	1170	9	1161	9	1152	9	1143	9	1134

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.209 9917	1281	9.215 7795	1316	0.784 2205	9.994 2122	35	0	40
	10	9.210 1198	1281	9.215 9111	1315	0.784 0889	9.994 2087	34	50	
	20	9.210 2479	1280	9.216 0426	1315	0.783 9574	9.994 2053	35	40	
	30	9.210 3759	1280	9.216 1741	1314	0.783 8259	9.994 2018	34	30	
	40	9.210 5039	1279	9.216 3055	1314	0.783 6945	9.994 1984	35	20	
	50	9.210 6318	1279	9.216 4369	1314	0.783 5631	9.994 1949	35	10	
21	0	9.210 7597	1278	9.216 5683	1313	0.783 4317	9.994 1914	34	0	39
	10	9.210 8875	1279	9.216 6996	1313	0.783 3004	9.994 1880	35	50	
	20	9.211 0154	1277	9.216 8309	1312	0.783 1691	9.994 1845	35	40	
	30	9.211 1431	1278	9.216 9621	1312	0.783 0379	9.994 1810	34	30	
	40	9.211 2709	1277	9.217 0933	1312	0.782 9067	9.994 1776	35	20	
	50	9.211 3986	1277	9.217 2245	1311	0.782 7755	9.994 1741	35	10	
22	0	9.211 5263	1276	9.217 3556	1311	0.782 6444	9.994 1706	35	0	38
	10	9.211 6539	1276	9.217 4867	1311	0.782 5133	9.994 1671	34	50	
	20	9.211 7815	1275	9.217 6178	1310	0.782 3822	9.994 1637	35	40	
	30	9.211 9090	1275	9.217 7488	1310	0.782 2512	9.994 1602	35	30	
	40	9.212 0365	1275	9.217 8798	1310	0.782 1202	9.994 1567	35	20	
	50	9.212 1640	1274	9.218 0108	1309	0.781 9892	9.994 1532	34	10	
23	0	9.212 2914	1274	9.218 1417	1309	0.781 8583	9.994 1498	35	0	37
	10	9.212 4188	1274	9.218 2726	1308	0.781 7274	9.994 1463	35	50	
	20	9.212 5462	1273	9.218 4034	1308	0.781 5966	9.994 1428	35	40	
	30	9.212 6735	1273	9.218 5342	1308	0.781 4658	9.994 1393	35	30	
	40	9.212 8008	1272	9.218 6650	1307	0.781 3350	9.994 1358	35	20	
	50	9.212 9280	1272	9.218 7957	1307	0.781 2043	9.994 1323	34	10	
24	0	9.213 0552	1272	9.218 9264	1306	0.781 0736	9.994 1289	35	0	36
	10	9.213 1824	1271	9.219 0570	1306	0.780 9430	9.994 1254	35	50	
	20	9.213 3095	1271	9.219 1876	1306	0.780 8124	9.994 1219	35	40	
	30	9.213 4366	1271	9.219 3182	1306	0.780 6818	9.994 1184	35	30	
	40	9.213 5637	1270	9.219 4488	1305	0.780 5512	9.994 1149	35	20	
	50	9.213 6907	1269	9.219 5793	1304	0.780 4207	9.994 1114	35	10	
25	0	9.213 8176	1270	9.219 7097	1304	0.780 2903	9.994 1079	35	0	35
	10	9.213 9446	1269	9.219 8401	1304	0.780 1599	9.994 1044	35	50	
	20	9.214 0715	1268	9.219 9705	1304	0.780 0295	9.994 1009	35	40	
	30	9.214 1983	1269	9.220 1009	1303	0.779 8991	9.994 0974	35	30	
	40	9.214 3252	1267	9.220 2312	1303	0.779 7688	9.994 0939	34	20	
	50	9.214 4519	1268	9.220 3615	1302	0.779 6385	9.994 0905	35	10	
26	0	9.214 5787	1267	9.220 4917	1302	0.779 5083	9.994 0870	35	0	34
	10	9.214 7054	1267	9.220 6219	1302	0.779 3781	9.994 0835	35	50	
	20	9.214 8321	1266	9.220 7521	1301	0.779 2479	9.994 0800	35	40	
	30	9.214 9587	1266	9.220 8822	1301	0.779 1178	9.994 0765	35	30	
	40	9.215 0853	1265	9.221 0123	1301	0.778 9877	9.994 0730	36	20	
	50	9.215 2118	1266	9.221 1424	1300	0.778 8576	9.994 0694	35	10	
27	0	9.215 3384	1264	9.221 2724	1300	0.778 7276	9.994 0659	35	0	33
	10	9.215 4648	1265	9.221 4024	1300	0.778 5976	9.994 0624	35	50	
	20	9.215 5913	1264	9.221 5324	1299	0.778 4676	9.994 0589	35	40	
	30	9.215 7177	1264	9.221 6623	1298	0.778 3377	9.994 0554	35	30	
	40	9.215 8441	1263	9.221 7921	1299	0.778 2079	9.994 0519	35	20	
	50	9.215 9704	1263	9.221 9220	1298	0.778 0780	9.994 0484	35	10	
28	0	9.216 0967	1262	9.222 0518	1297	0.777 9482	9.994 0449	35	0	32
	10	9.216 2229	1262	9.222 1815	1298	0.777 8185	9.994 0414	35	50	
	20	9.216 3491	1262	9.222 3113	1297	0.777 6887	9.994 0379	35	40	
	30	9.216 4753	1262	9.222 4410	1296	0.777 5590	9.994 0344	36	30	
	40	9.216 6015	1261	9.222 5706	1296	0.777 4294	9.994 0308	35	20	
	50	9.216 7276	1260	9.222 7002	1296	0.777 2998	9.994 0273	35	10	
29	0	9.216 8536	1261	9.222 8298	1296	0.777 1702	9.994 0238	35	0	31
	10	9.216 9797	1259	9.222 9594	1295	0.777 0406	9.994 0203	35	50	
	20	9.217 1056	1260	9.223 0889	1294	0.776 9111	9.994 0168	35	40	
	30	9.217 2316	1259	9.223 2183	1295	0.776 7817	9.994 0133	36	30	
	40	9.217 3575	1259	9.223 3478	1294	0.776 6522	9.994 0097	35	20	
	50	9.217 4834	1258	9.223 4772	1293	0.776 5228	9.994 0062	35	10	
30	0	9.217 6092		9.223 6065		0.776 3935	9.994 0027		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

80°

9°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.217 6092	1258	9.223 6065	1294	0.776 3935	9.994 0027	35	0	30
	10	9.217 7350	1258	9.223 7359	1293	0.776 2641	9.993 9992	36	50	
	20	9.217 8608	1257	9.223 8652	1292	0.776 1348	9.993 9956	35	40	
	30	9.217 9865	1257	9.223 9944	1292	0.776 0056	9.993 9921	35	30	
	40	9.218 1122	1257	9.224 1236	1292	0.775 8764	9.993 9886	35	20	
	50	9.218 2379	1256	9.224 2528	1291	0.775 7472	9.993 9851	36	10	
31	0	9.218 3635	1256	9.224 3819	1292	0.775 6181	9.993 9815	35	0	29
	10	9.218 4891	1255	9.224 5111	1290	0.775 4889	9.993 9780	35	50	
	20	9.218 6146	1255	9.224 6401	1291	0.775 3599	9.993 9745	36	40	
	30	9.218 7401	1255	9.224 7692	1290	0.775 2308	9.993 9709	35	30	
	40	9.218 8656	1254	9.224 8982	1289	0.775 1018	9.993 9674	35	20	
	50	9.218 9910	1254	9.225 0271	1290	0.774 9729	9.993 9639	36	10	
32	0	9.219 1164	1253	9.225 1561	1288	0.774 8439	9.993 9603	35	0	28
	10	9.219 2417	1254	9.225 2849	1289	0.774 7151	9.993 9568	35	50	
	20	9.219 3671	1252	9.225 4138	1288	0.774 5862	9.993 9533	36	40	
	30	9.219 4923	1253	9.225 5426	1288	0.774 4574	9.993 9497	35	30	
	40	9.219 6176	1252	9.225 6714	1287	0.774 3286	9.993 9462	36	20	
	50	9.219 7428	1252	9.225 8001	1288	0.774 1999	9.993 9426	35	10	
33	0	9.219 8680	1251	9.225 9289	1286	0.774 0711	9.993 9391	35	0	27
	10	9.219 9931	1251	9.226 0575	1287	0.773 9425	9.993 9356	36	50	
	20	9.220 1182	1250	9.226 1862	1286	0.773 8138	9.993 9320	35	40	
	30	9.220 2432	1251	9.226 3148	1285	0.773 6852	9.993 9285	36	30	
	40	9.220 3683	1249	9.226 4433	1286	0.773 5567	9.993 9249	35	20	
	50	9.220 4932	1250	9.226 5719	1285	0.773 4281	9.993 9214	36	10	
34	0	9.220 6182	1249	9.226 7004	1284	0.773 2996	9.993 9178	35	0	26
	10	9.220 7431	1249	9.226 8288	1284	0.773 1712	9.993 9143	36	50	
	20	9.220 8680	1248	9.226 9572	1284	0.773 0428	9.993 9107	35	40	
	30	9.220 9928	1248	9.227 0856	1284	0.772 9144	9.993 9072	36	30	
	40	9.221 1176	1248	9.227 2140	1283	0.772 7860	9.993 9036	35	20	
	50	9.221 2424	1247	9.227 3423	1283	0.772 6577	9.993 9001	36	10	
35	0	9.221 3671	1247	9.227 4706	1282	0.772 5294	9.993 8965	35	0	25
	10	9.221 4918	1246	9.227 5988	1282	0.772 4012	9.993 8930	36	50	
	20	9.221 6164	1246	9.227 7270	1282	0.772 2730	9.993 8894	36	40	
	30	9.221 7410	1246	9.227 8552	1281	0.772 1448	9.993 8858	35	30	
	40	9.221 8656	1246	9.227 9833	1281	0.772 0167	9.993 8823	36	20	
	50	9.221 9902	1245	9.228 1114	1281	0.771 8886	9.993 8787	35	10	
36	0	9.222 1147	1244	9.228 2395	1280	0.771 7605	9.993 8752	36	0	24
	10	9.222 2391	1245	9.228 3675	1280	0.771 6325	9.993 8716	36	50	
	20	9.222 3636	1244	9.228 4955	1280	0.771 5045	9.993 8680	35	40	
	30	9.222 4880	1243	9.228 6235	1279	0.771 3765	9.993 8645	36	30	
	40	9.222 6123	1243	9.228 7514	1279	0.771 2486	9.993 8609	35	20	
	50	9.222 7366	1243	9.228 8793	1278	0.771 1207	9.993 8574	36	10	
37	0	9.222 8609	1243	9.229 0071	1279	0.770 9929	9.993 8538	36	0	23
	10	9.222 9852	1242	9.229 1350	1277	0.770 8650	9.993 8502	36	50	
	20	9.223 1094	1242	9.229 2627	1278	0.770 7373	9.993 8466	35	40	
	30	9.223 2336	1241	9.229 3905	1277	0.770 6095	9.993 8431	36	30	
	40	9.223 3577	1241	9.229 5182	1277	0.770 4818	9.993 8395	36	20	
	50	9.223 4818	1241	9.229 6459	1276	0.770 3541	9.993 8359	35	10	
38	0	9.223 6059	1240	9.229 7735	1276	0.770 2265	9.993 8324	36	0	22
	10	9.223 7299	1240	9.229 9011	1276	0.770 0989	9.993 8288	36	50	
	20	9.223 8539	1239	9.230 0287	1275	0.769 9713	9.993 8252	36	40	
	30	9.223 9778	1240	9.230 1562	1275	0.769 8438	9.993 8216	35	30	
	40	9.224 1018	1238	9.230 2837	1275	0.769 7163	9.993 8181	36	20	
	50	9.224 2256	1239	9.230 4112	1274	0.769 5888	9.993 8145	36	10	
39	0	9.224 3495	1238	9.230 5386	1274	0.769 4614	9.993 8109	36	0	21
	10	9.224 4733	1238	9.230 6660	1273	0.769 3340	9.993 8073	36	50	
	20	9.224 5971	1237	9.230 7933	1274	0.769 2067	9.993 8037	35	40	
	30	9.224 7208	1237	9.230 9207	1272	0.769 0793	9.993 8002	36	30	
	40	9.224 8445	1237	9.231 0479	1273	0.768 9521	9.993 7966	36	20	
	50	9.224 9682	1236	9.231 1752	1272	0.768 8248	9.993 7930	36	10	
40	0	9.225 0918		9.231 3024		0.768 6976	9.993 7894		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

80°

	1290
1	129
2	258
3	387
4	516
5	645
6	774
7	903
8	1032
9	1161

	1280
1	128
2	256
3	384
4	512
5	640
6	768
7	896
8	1024
9	1152

	1270
1	127
2	254
3	381
4	508
5	635
6	762
7	889
8	1016
9	1143

	1260
1	126
2	252
3	378
4	504
5	630
6	756
7	882
8	1008
9	1134

	1250
1	125
2	250
3	375
4	500
5	625
6	750
7	875
8	1000
9	1125

	1240
1	124
2	248
3	372
4	496
5	620
6	744
7	868
8	992
9	1116

	1230
1	123
2	246
3	369
4	492
5	615
6	738
7	861
8	984
9	1107

9°

	1270
1	127
2	254
3	381
4	508
5	635
6	762
7	889
8	1016
9	1143

	1260
1	126
2	252
3	378
4	504
5	630
6	756
7	882
8	1008
9	1134

	1250
1	125
2	250
3	375
4	500
5	625
6	750
7	875
8	1000
9	1125

	1240
1	124
2	248
3	372
4	496
5	620
6	744
7	868
8	992
9	1116

	1230
1	123
2	246
3	369
4	492
5	615
6	738
7	861
8	984
9	1107

	1220
1	122
2	244
3	366
4	488
5	610
6	732
7	854
8	976
9	1098

	1210
1	121
2	242
3	363
4	484
5	605
6	726
7	847
8	968
9	1089

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.225 0918	1236	9.231 3024	1272	0.768 6976	9.993 7894	36	0	20
	10	9.225 2154	1236	9.231 4296	1271	0.768 5704	9.993 7858	36	50	
	20	9.225 3390	1235	9.231 5567	1271	0.768 4433	9.993 7822	36	40	
	30	9.225 4625	1235	9.231 6838	1271	0.768 3162	9.993 7786	36	30	
	40	9.225 5860	1234	9.231 8109	1271	0.768 1891	9.993 7750	35	20	
	50	9.225 7094	1234	9.231 9380	1270	0.768 0620	9.993 7715	36	10	
41	0	9.225 8328	1234	9.232 0650	1269	0.767 9350	9.993 7679	36	0	19
	10	9.225 9562	1233	9.232 1919	1270	0.767 8081	9.993 7643	36	50	
	20	9.226 0795	1233	9.232 3189	1269	0.767 6811	9.993 7607	36	40	
	30	9.226 2028	1233	9.232 4458	1268	0.767 5542	9.993 7571	36	30	
	40	9.226 3261	1232	9.232 5726	1269	0.767 4274	9.993 7535	36	20	
	50	9.226 4493	1232	9.232 6995	1267	0.767 3005	9.993 7499	36	10	
42	0	9.226 5725	1232	9.232 8262	1268	0.767 1738	9.993 7463	36	0	18
	10	9.226 6957	1231	9.232 9530	1267	0.767 0470	9.993 7427	36	50	
	20	9.226 8188	1231	9.233 0797	1267	0.766 9203	9.993 7391	36	40	
	30	9.226 9419	1231	9.233 2064	1267	0.766 7936	9.993 7355	36	30	
	40	9.227 0650	1230	9.233 3331	1266	0.766 6669	9.993 7319	36	20	
	50	9.227 1880	1230	9.233 4597	1266	0.766 5403	9.993 7283	36	10	
43	0	9.227 3110	1229	9.233 5863	1265	0.766 4137	9.993 7247	36	0	17
	10	9.227 4339	1229	9.233 7128	1265	0.766 2872	9.993 7211	36	50	
	20	9.227 5568	1229	9.233 8393	1265	0.766 1607	9.993 7175	36	40	
	30	9.227 6797	1228	9.233 9658	1265	0.766 0342	9.993 7139	37	30	
	40	9.227 8025	1228	9.234 0923	1264	0.765 9077	9.993 7102	36	20	
	50	9.227 9253	1228	9.234 2187	1264	0.765 7813	9.993 7066	36	10	
44	0	9.228 0481	1227	9.234 3451	1263	0.765 6549	9.993 7030	36	0	16
	10	9.228 1708	1227	9.234 4714	1263	0.765 5286	9.993 6994	36	50	
	20	9.228 2935	1227	9.234 5977	1263	0.765 4023	9.993 6958	36	40	
	30	9.228 4162	1226	9.234 7240	1262	0.765 2760	9.993 6922	36	30	
	40	9.228 5388	1226	9.234 8502	1262	0.765 1498	9.993 6886	37	20	
	50	9.228 6614	1225	9.234 9764	1262	0.765 0236	9.993 6849	36	10	
45	0	9.228 7839	1225	9.235 1026	1261	0.764 8974	9.993 6813	36	0	15
	10	9.228 9064	1225	9.235 2287	1261	0.764 7713	9.993 6777	36	50	
	20	9.229 0289	1225	9.235 3548	1261	0.764 6452	9.993 6741	36	40	
	30	9.229 1514	1224	9.235 4809	1260	0.764 5191	9.993 6705	36	30	
	40	9.229 2738	1224	9.235 6069	1260	0.764 3931	9.993 6669	37	20	
	50	9.229 3962	1223	9.235 7329	1260	0.764 2671	9.993 6632	36	10	
46	0	9.229 5185	1223	9.235 8589	1259	0.764 1411	9.993 6596	36	0	14
	10	9.229 6408	1223	9.235 9848	1259	0.764 0152	9.993 6560	36	50	
	20	9.229 7631	1222	9.236 1107	1259	0.763 8893	9.993 6524	37	40	
	30	9.229 8853	1222	9.236 2366	1258	0.763 7634	9.993 6487	36	30	
	40	9.230 0075	1222	9.236 3624	1258	0.763 6376	9.993 6451	36	20	
	50	9.230 1297	1221	9.236 4882	1257	0.763 5118	9.993 6415	37	10	
47	0	9.230 2518	1221	9.236 6139	1258	0.763 3861	9.993 6378	36	0	13
	10	9.230 3739	1220	9.236 7397	1256	0.763 2603	9.993 6342	36	50	
	20	9.230 4959	1220	9.236 8653	1257	0.763 1347	9.993 6306	37	40	
	30	9.230 6179	1220	9.236 9910	1256	0.763 0090	9.993 6269	36	30	
	40	9.230 7399	1220	9.237 1166	1256	0.762 8834	9.993 6233	36	20	
	50	9.230 8619	1219	9.237 2422	1256	0.762 7578	9.993 6197	37	10	
48	0	9.230 9838	1219	9.237 3678	1255	0.762 6322	9.993 6160	36	0	12
	10	9.231 1057	1218	9.237 4933	1255	0.762 5067	9.993 6124	36	50	
	20	9.231 2275	1218	9.237 6188	1254	0.762 3812	9.993 6088	37	40	
	30	9.231 3493	1218	9.237 7442	1254	0.762 2558	9.993 6051	36	30	
	40	9.231 4711	1217	9.237 8696	1254	0.762 1304	9.993 6015	37	20	
	50	9.231 5928	1217	9.237 9950	1253	0.762 0050	9.993 5978	36	10	
49	0	9.231 7145	1217	9.238 1203	1254	0.761 8797	9.993 5942	36	0	11
	10	9.231 8362	1216	9.238 2457	1252	0.761 7543	9.993 5906	37	50	
	20	9.231 9578	1216	9.238 3709	1253	0.761 6291	9.993 5869	36	40	
	30	9.232 0794	1216	9.238 4962	1252	0.761 5038	9.993 5833	37	30	
	40	9.232 2010	1215	9.238 6214	1252	0.761 3786	9.993 5796	36	20	
	50	9.232 3225	1215	9.238 7466	1251	0.761 2534	9.993 5760	37	10	
50	0	9.232 4440		9.238 8717		0.761 1283	9.993 5723		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

80°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.232 4440	1215	9.238 8717	1251	0.761 1283	9.993 5723	36	0	10
	10	9.232 5655	1214	9.238 9968	1251	0.761 0032	9.993 5687	37	50	
	20	9.232 6869	1214	9.239 1219	1250	0.760 8781	9.993 5650	36	40	
	30	9.232 8083	1213	9.239 2469	1250	0.760 7531	9.993 5614	37	30	
	40	9.232 9296	1214	9.239 3719	1250	0.760 6281	9.993 5577	36	20	
	50	9.233 0510	1212	9.239 4969	1249	0.760 5031	9.993 5541	37	10	
51	0	9.233 1722	1213	9.239 6218	1249	0.760 3782	9.993 5504	37	0	9
	10	9.233 2935	1212	9.239 7467	1249	0.760 2533	9.993 5467	36	50	
	20	9.233 4147	1212	9.239 8716	1248	0.760 1284	9.993 5431	37	40	
	30	9.233 5359	1211	9.239 9964	1249	0.760 0036	9.993 5394	36	30	
	40	9.233 6570	1211	9.240 1213	1247	0.759 8787	9.993 5358	37	20	
	50	9.233 7781	1211	9.240 2460	1248	0.759 7540	9.993 5321	36	10	
52	0	9.233 8992	1210	9.240 3708	1247	0.759 6292	9.993 5285	37	0	8
	10	9.234 0202	1211	9.240 4955	1246	0.759 5045	9.993 5248	37	50	
	20	9.234 1413	1209	9.240 6201	1247	0.759 3799	9.993 5211	36	40	
	30	9.234 2622	1210	9.240 7448	1246	0.759 2552	9.993 5175	37	30	
	40	9.234 3832	1209	9.240 8694	1245	0.759 1306	9.993 5138	37	20	
	50	9.234 5041	1208	9.240 9939	1246	0.759 0061	9.993 5101	36	10	
53	0	9.234 6249	1209	9.241 1185	1245	0.758 8815	9.993 5065	37	0	7
	10	9.234 7458	1208	9.241 2430	1244	0.758 7570	9.993 5028	37	50	
	20	9.234 8666	1207	9.241 3674	1245	0.758 6326	9.993 4991	36	40	
	30	9.234 9873	1207	9.241 4919	1244	0.758 5081	9.993 4955	37	30	
	40	9.235 1080	1207	9.241 6163	1243	0.758 3837	9.993 4918	37	20	
	50	9.235 2287	1207	9.241 7406	1244	0.758 2594	9.993 4881	37	10	
54	0	9.235 3494	1206	9.241 8650	1243	0.758 1350	9.993 4844	36	0	6
	10	9.235 4700	1206	9.241 9893	1242	0.758 0107	9.993 4808	37	50	
	20	9.235 5906	1206	9.242 1135	1243	0.757 8865	9.993 4771	37	40	
	30	9.235 7112	1205	9.242 2378	1242	0.757 7622	9.993 4734	37	30	
	40	9.235 8317	1205	9.242 3620	1241	0.757 6380	9.993 4697	37	20	
	50	9.235 9522	1204	9.242 4861	1242	0.757 5139	9.993 4660	36	10	
55	0	9.236 0726	1204	9.242 6103	1240	0.757 3897	9.993 4624	37	0	5
	10	9.236 1930	1204	9.242 7343	1241	0.757 2657	9.993 4587	37	50	
	20	9.236 3134	1204	9.242 8584	1240	0.757 1416	9.993 4550	37	40	
	30	9.236 4338	1203	9.242 9824	1240	0.757 0176	9.993 4513	37	30	
	40	9.236 5541	1203	9.243 1064	1240	0.756 8936	9.993 4476	37	20	
	50	9.236 6744	1202	9.243 2304	1239	0.756 7696	9.993 4439	36	10	
56	0	9.236 7946	1202	9.243 3543	1239	0.756 6457	9.993 4403	37	0	4
	10	9.236 9148	1202	9.243 4782	1239	0.756 5218	9.993 4366	37	50	
	20	9.237 0350	1201	9.243 6021	1238	0.756 3979	9.993 4329	37	40	
	30	9.237 1551	1201	9.243 7259	1238	0.756 2741	9.993 4292	37	30	
	40	9.237 2752	1201	9.243 8497	1238	0.756 1503	9.993 4255	37	20	
	50	9.237 3953	1200	9.243 9735	1237	0.756 0265	9.993 4218	37	10	
57	0	9.237 5153	1201	9.244 0972	1237	0.755 9028	9.993 4181	37	0	3
	10	9.237 6354	1199	9.244 2209	1237	0.755 7791	9.993 4144	37	50	
	20	9.237 7553	1200	9.244 3446	1236	0.755 6554	9.993 4107	37	40	
	30	9.237 8753	1199	9.244 4682	1236	0.755 5318	9.993 4070	37	30	
	40	9.237 9952	1198	9.244 5918	1236	0.755 4082	9.993 4033	37	20	
	50	9.238 1150	1199	9.244 7154	1235	0.755 2846	9.993 3996	37	10	
58	0	9.238 2349	1198	9.244 8389	1235	0.755 1611	9.993 3959	37	0	2
	10	9.238 3547	1197	9.244 9624	1235	0.755 0376	9.993 3922	37	50	
	20	9.238 4744	1198	9.245 0859	1234	0.754 9141	9.993 3885	37	40	
	30	9.238 5942	1197	9.245 2093	1234	0.754 7907	9.993 3848	37	30	
	40	9.238 7139	1196	9.245 3327	1234	0.754 6673	9.993 3811	37	20	
	50	9.238 8335	1197	9.245 4561	1233	0.754 5439	9.993 3774	37	10	
59	0	9.238 9532	1196	9.245 5794	1233	0.754 4206	9.993 3737	37	0	1
	10	9.239 0728	1195	9.245 7027	1233	0.754 2973	9.993 3700	37	50	
	20	9.239 1923	1195	9.245 8260	1233	0.754 1740	9.993 3663	37	40	
	30	9.239 3118	1195	9.245 9493	1232	0.754 0507	9.993 3626	37	30	
	40	9.239 4313	1195	9.246 0725	1231	0.753 9275	9.993 3589	37	20	
	50	9.239 5508	1194	9.246 1956	1232	0.753 8044	9.993 3552	37	10	
60	0	9.239 6702		9.246 3188		0.753 6812	9.993 3515		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

80°

1250	
1	125
2	250
3	375
4	500
5	625
6	750
7	875
8	1000
9	1125

1240	
1	124
2	248
3	372
4	496
5	620
6	744
7	868
8	992
9	1116

1230	
1	123
2	246
3	369
4	492
5	615
6	738
7	861
8	984
9	1107

1220	
1	122
2	244
3	366
4	488
5	610
6	732
7	854
8	976
9	1098

1210	
1	121
2	242
3	363
4	484
5	605
6	726
7	847
8	968
9	1089

1200	
1	120
2	240
3	360
4	480
5	600
6	720
7	840
8	960
9	1080

1190	
1	119
2	238
3	357
4	476
5	595
6	714
7	833
8	952
9	1071

10°

1230	
1	123
2	246
3	369
4	492
5	615
6	738
7	861
8	984
9	1107

1220	
1	122
2	244
3	366
4	488
5	610
6	732
7	854
8	976
9	1098

1210	
1	121
2	242
3	363
4	484
5	605
6	726
7	847
8	968
9	1089

1200	
1	120
2	240
3	360
4	480
5	600
6	720
7	840
8	960
9	1080

37	
1	3.7
2	7.4
3	11.1
4	14.8
5	18.5
6	22.2
7	25.9
8	29.6
9	33.3

38	
1	3.8
2	7.6
3	11.4
4	15.2
5	19.0
6	22.8
7	26.6
8	30.4
9	34.2

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.239 6702	1194	9.246 3188	1231	0.753 6812	9.993 3515	38	0	60
	10	9.239 7896	1194	9.246 4419	1231	0.753 5581	9.993 3477	37	50	
	20	9.239 9090	1193	9.246 5650	1230	0.753 4350	9.993 3440	37	40	
	30	9.240 0283	1193	9.246 6880	1230	0.753 3120	9.993 3403	37	30	
	40	9.240 1476	1193	9.246 8110	1230	0.753 1890	9.993 3366	37	20	
	50	9.240 2669	1192	9.246 9340	1229	0.753 0660	9.993 3329	37	10	
1	0	9.240 3861	1192	9.247 0569	1229	0.752 9431	9.993 3292	38	0	59
	10	9.240 5053	1191	9.247 1798	1229	0.752 8202	9.993 3254	37	50	
	20	9.240 6244	1192	9.247 3027	1228	0.752 6973	9.993 3217	37	40	
	30	9.240 7436	1190	9.247 4255	1229	0.752 5745	9.993 3180	37	30	
	40	9.240 8626	1191	9.247 5484	1227	0.752 4516	9.993 3143	37	20	
	50	9.240 9817	1190	9.247 6711	1228	0.752 3289	9.993 3106	38	10	
2	0	9.241 1007	1190	9.247 7939	1227	0.752 2061	9.993 3068	37	0	58
	10	9.241 2197	1190	9.247 9166	1227	0.752 0834	9.993 3031	37	50	
	20	9.241 3387	1189	9.248 0393	1226	0.751 9607	9.993 2994	37	40	
	30	9.241 4576	1189	9.248 1619	1226	0.751 8381	9.993 2957	38	30	
	40	9.241 5765	1188	9.248 2845	1226	0.751 7155	9.993 2919	37	20	
	50	9.241 6953	1188	9.248 4071	1226	0.751 5929	9.993 2882	37	10	
3	0	9.241 8141	1188	9.248 5297	1225	0.751 4703	9.993 2845	38	0	57
	10	9.241 9329	1188	9.248 6522	1225	0.751 3478	9.993 2807	37	50	
	20	9.242 0517	1187	9.248 7747	1224	0.751 2253	9.993 2770	37	40	
	30	9.242 1704	1187	9.248 8971	1225	0.751 1029	9.993 2733	38	30	
	40	9.242 2891	1186	9.249 0196	1224	0.750 9804	9.993 2695	37	20	
	50	9.242 4077	1187	9.249 1420	1223	0.750 8580	9.993 2658	37	10	
4	0	9.242 5264	1185	9.249 2643	1223	0.750 7357	9.993 2621	38	0	56
	10	9.242 6449	1186	9.249 3866	1223	0.750 6134	9.993 2583	37	50	
	20	9.242 7635	1185	9.249 5089	1223	0.750 4911	9.993 2546	38	40	
	30	9.242 8820	1185	9.249 6312	1222	0.750 3688	9.993 2508	37	30	
	40	9.243 0005	1185	9.249 7534	1222	0.750 2466	9.993 2471	37	20	
	50	9.243 1190	1184	9.249 8756	1222	0.750 1244	9.993 2434	38	10	
5	0	9.243 2374	1184	9.249 9978	1221	0.750 0022	9.993 2396	37	0	55
	10	9.243 3558	1183	9.250 1199	1221	0.749 8801	9.993 2359	38	50	
	20	9.243 4741	1183	9.250 2420	1221	0.749 7580	9.993 2321	37	40	
	30	9.243 5924	1183	9.250 3641	1220	0.749 6359	9.993 2284	38	30	
	40	9.243 7107	1183	9.250 4861	1220	0.749 5139	9.993 2246	37	20	
	50	9.243 8290	1182	9.250 6081	1220	0.749 3919	9.993 2209	38	10	
6	0	9.243 9472	1182	9.250 7301	1219	0.749 2699	9.993 2171	37	0	54
	10	9.244 0654	1181	9.250 8520	1219	0.749 1480	9.993 2134	38	50	
	20	9.244 1835	1182	9.250 9739	1219	0.749 0261	9.993 2096	37	40	
	30	9.244 3017	1180	9.251 0958	1218	0.748 9042	9.993 2059	38	30	
	40	9.244 4197	1181	9.251 2176	1218	0.748 7824	9.993 2021	37	20	
	50	9.244 5378	1180	9.251 3394	1218	0.748 6606	9.993 1984	38	10	
7	0	9.244 6558	1180	9.251 4612	1218	0.748 5388	9.993 1946	38	0	53
	10	9.244 7738	1180	9.251 5830	1217	0.748 4170	9.993 1908	37	50	
	20	9.244 8918	1179	9.251 7047	1217	0.748 2953	9.993 1871	38	40	
	30	9.245 0097	1179	9.251 8264	1216	0.748 1736	9.993 1833	37	30	
	40	9.245 1276	1178	9.251 9480	1216	0.748 0520	9.993 1796	38	20	
	50	9.245 2454	1178	9.252 0696	1216	0.747 9304	9.993 1758	38	10	
8	0	9.245 3632	1178	9.252 1912	1216	0.747 8088	9.993 1720	37	0	52
	10	9.245 4810	1178	9.252 3128	1215	0.747 6872	9.993 1683	38	50	
	20	9.245 5988	1177	9.252 4343	1215	0.747 5657	9.993 1645	38	40	
	30	9.245 7165	1177	9.252 5558	1214	0.747 4442	9.993 1607	37	30	
	40	9.245 8342	1177	9.252 6772	1215	0.747 3228	9.993 1570	38	20	
	50	9.245 9519	1176	9.252 7987	1213	0.747 2013	9.993 1532	38	10	
9	0	9.246 0695	1176	9.252 9200	1214	0.747 0800	9.993 1494	37	0	51
	10	9.246 1871	1175	9.253 0414	1213	0.746 9586	9.993 1457	38	50	
	20	9.246 3046	1176	9.253 1627	1213	0.746 8373	9.993 1419	38	40	
	30	9.246 4222	1175	9.253 2840	1213	0.746 7160	9.993 1381	37	30	
	40	9.246 5397	1174	9.253 4053	1212	0.746 5947	9.993 1344	38	20	
	50	9.246 6571	1175	9.253 5265	1212	0.746 4735	9.993 1306	38	10	
10	0	9.246 7746		9.253 6477		0.746 3523	9.993 1268		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

79°

10°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.246 7746	1173	9.253 6477	1212	0.746 3523	9.993 1268	38	0	50
	10	9.246 8919	1174	9.253 7689	1212	0.746 2311	9.993 1230	37	50	
	20	9.247 0093	1173	9.253 8901	1211	0.746 1099	9.993 1193	38	40	
	30	9.247 1266	1173	9.254 0112	1210	0.745 9888	9.993 1155	38	30	
	40	9.247 2439	1173	9.254 1322	1211	0.745 8678	9.993 1117	38	20	
	50	9.247 3612	1172	9.254 2533	1210	0.745 7467	9.993 1079	38	10	
11	0	9.247 4784	1172	9.254 3743	1210	0.745 6257	9.993 1041	37	0	49
	10	9.247 5956	1172	9.254 4953	1209	0.745 5047	9.993 1004	38	50	
	20	9.247 7128	1171	9.254 6162	1209	0.745 3838	9.993 0966	38	40	
	30	9.247 8299	1171	9.254 7371	1209	0.745 2629	9.993 0928	38	30	
	40	9.247 9470	1171	9.254 8580	1209	0.745 1420	9.993 0890	38	20	
	50	9.248 0641	1170	9.254 9789	1208	0.745 0211	9.993 0852	38	10	
12	0	9.248 1811	1170	9.255 0997	1208	0.744 9003	9.993 0814	38	0	48
	10	9.248 2981	1170	9.255 2205	1208	0.744 7795	9.993 0776	38	50	
	20	9.248 4151	1170	9.255 3413	1207	0.744 6587	9.993 0738	37	40	
	30	9.248 5321	1169	9.255 4620	1207	0.744 5380	9.993 0701	38	30	
	40	9.248 6490	1168	9.255 5827	1207	0.744 4173	9.993 0663	38	20	
	50	9.248 7658	1169	9.255 7034	1206	0.744 2966	9.993 0625	38	10	
13	0	9.248 8827	1168	9.255 8240	1206	0.744 1760	9.993 0587	38	0	47
	10	9.248 9995	1168	9.255 9446	1206	0.744 0554	9.993 0549	38	50	
	20	9.249 1163	1167	9.256 0652	1205	0.743 9348	9.993 0511	38	40	
	30	9.249 2330	1167	9.256 1857	1205	0.743 8143	9.993 0473	38	30	
	40	9.249 3497	1167	9.256 3062	1205	0.743 6938	9.993 0435	38	20	
	50	9.249 4664	1166	9.256 4267	1205	0.743 5733	9.993 0397	38	10	
14	0	9.249 5830	1167	9.256 5472	1204	0.743 4528	9.993 0359	38	0	46
	10	9.249 6997	1165	9.256 6676	1204	0.743 3324	9.993 0321	38	50	
	20	9.249 8162	1166	9.256 7880	1203	0.743 2120	9.993 0283	38	40	
	30	9.249 9328	1165	9.256 9083	1203	0.743 0917	9.993 0245	38	30	
	40	9.250 0493	1165	9.257 0286	1203	0.742 9714	9.993 0207	38	20	
	50	9.250 1658	1164	9.257 1489	1203	0.742 8511	9.993 0169	38	10	
15	0	9.250 2822	1165	9.257 2692	1202	0.742 7308	9.993 0131	38	0	45
	10	9.250 3987	1163	9.257 3894	1202	0.742 6106	9.993 0093	39	50	
	20	9.250 5150	1164	9.257 5096	1202	0.742 4904	9.993 0054	38	40	
	30	9.250 6314	1163	9.257 6298	1201	0.742 3702	9.993 0016	38	30	
	40	9.250 7477	1163	9.257 7499	1201	0.742 2501	9.992 9978	38	20	
	50	9.250 8640	1163	9.257 8700	1201	0.742 1300	9.992 9940	38	10	
16	0	9.250 9803	1162	9.257 9901	1200	0.742 0099	9.992 9902	38	0	44
	10	9.251 0965	1162	9.258 1101	1200	0.741 8899	9.992 9864	38	50	
	20	9.251 2127	1162	9.258 2301	1200	0.741 7699	9.992 9826	38	40	
	30	9.251 3289	1161	9.258 3501	1200	0.741 6499	9.992 9788	39	30	
	40	9.251 4450	1161	9.258 4701	1199	0.741 5299	9.992 9749	38	20	
	50	9.251 5611	1161	9.258 5900	1199	0.741 4100	9.992 9711	38	10	
17	0	9.251 6772	1160	9.258 7099	1198	0.741 2901	9.992 9673	38	0	43
	10	9.251 7932	1160	9.258 8297	1198	0.741 1703	9.992 9635	38	50	
	20	9.251 9092	1160	9.258 9495	1198	0.741 0505	9.992 9597	39	40	
	30	9.252 0252	1159	9.259 0693	1198	0.740 9307	9.992 9558	38	30	
	40	9.252 1411	1159	9.259 1891	1197	0.740 8109	9.992 9520	38	20	
	50	9.252 2570	1159	9.259 3088	1197	0.740 6912	9.992 9482	38	10	
18	0	9.252 3729	1158	9.259 4285	1197	0.740 5715	9.992 9444	39	0	42
	10	9.252 4887	1158	9.259 5482	1196	0.740 4518	9.992 9405	38	50	
	20	9.252 6045	1158	9.259 6678	1197	0.740 3322	9.992 9367	38	40	
	30	9.252 7203	1158	9.259 7875	1195	0.740 2125	9.992 9329	39	30	
	40	9.252 8361	1157	9.259 9070	1196	0.740 0930	9.992 9290	38	20	
	50	9.252 9518	1157	9.260 0266	1195	0.739 9734	9.992 9252	38	10	
19	0	9.253 0675	1156	9.260 1461	1195	0.739 8539	9.992 9214	39	0	41
	10	9.253 1831	1156	9.260 2656	1194	0.739 7344	9.992 9175	38	50	
	20	9.253 2987	1156	9.260 3850	1195	0.739 6150	9.992 9137	38	40	
	30	9.253 4143	1156	9.260 5045	1194	0.739 4955	9.992 9099	39	30	
	40	9.253 5299	1155	9.260 6239	1193	0.739 3761	9.992 9060	38	20	
	50	9.253 6454	1155	9.260 7432	1193	0.739 2568	9.992 9022	38	10	
20	0	9.253 7609		9.260 8625		0.739 1375	9.992 8984		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

79°

	1190
1	119
2	238
3	357
4	476
5	595
6	714
7	833
8	952
9	1071

	1180
1	118
2	236
3	354
4	472
5	590
6	708
7	826
8	944
9	1062

	1170
1	117
2	234
3	351
4	468
5	585
6	702
7	819
8	936
9	1053

	1160
1	116
2	232
3	348
4	464
5	580
6	696
7	812
8	928
9	1044

	38
1	3.8
2	7.6
3	11.4
4	15.2
5	19.0
6	22.8
7	26.6
8	30.4
9	34.2

	39
1	3.9
2	7.8
3	11.7
4	15.6
5	19.5
6	23.4
7	27.3
8	31.2
9	35.1

10°

	1190
1	119
2	238
3	357
4	476
5	595
6	714
7	833
8	952
9	1071

	1180
1	118
2	236
3	354
4	472
5	590
6	708
7	826
8	944
9	1062

	1170
1	117
2	234
3	351
4	468
5	585
6	702
7	819
8	936
9	1053

	1160
1	116
2	232
3	348
4	464
5	580
6	696
7	812
8	928
9	1044

	38
1	3.8
2	7.6
3	11.4
4	15.2
5	19.0
6	22.8
7	26.6
8	30.4
9	34.2

	39
1	3.9
2	7.8
3	11.7
4	15.6
5	19.5
6	23.4
7	27.3
8	31.2
9	35.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.253 7609	1155	9.260 8625	1193	0.739 1375	9.992 8984	39	0	40
	10	9.253 8764	1154	9.260 9818	1193	0.739 0182	9.992 8945	38	50	
	20	9.253 9918	1154	9.261 1011	1193	0.738 8989	9.992 8907	39	40	
	30	9.254 1072	1154	9.261 2204	1192	0.738 7796	9.992 8868	38	30	
	40	9.254 2226	1153	9.261 3396	1191	0.738 6604	9.992 8830	38	20	
	50	9.254 3379	1153	9.261 4587	1192	0.738 5413	9.992 8792	39	10	
21	0	9.254 4532	1153	9.261 5779	1191	0.738 4221	9.992 8753	38	0	39
	10	9.254 5685	1152	9.261 6970	1191	0.738 3030	9.992 8715	39	50	
	20	9.254 6837	1152	9.261 8161	1191	0.738 1839	9.992 8676	38	40	
	30	9.254 7989	1152	9.261 9352	1190	0.738 0648	9.992 8638	39	30	
	40	9.254 9141	1151	9.262 0542	1190	0.737 9458	9.992 8599	38	20	
	50	9.255 0292	1152	9.262 1732	1189	0.737 8268	9.992 8561	39	10	
22	0	9.255 1444	1150	9.262 2921	1190	0.737 7079	9.992 8522	38	0	38
	10	9.255 2594	1151	9.262 4111	1189	0.737 5889	9.992 8484	39	50	
	20	9.255 3745	1150	9.262 5300	1189	0.737 4700	9.992 8445	38	40	
	30	9.255 4895	1150	9.262 6489	1188	0.737 3511	9.992 8407	39	30	
	40	9.255 6045	1150	9.262 7677	1188	0.737 2323	9.992 8368	39	20	
	50	9.255 7195	1149	9.262 8865	1188	0.737 1135	9.992 8329	38	10	
23	0	9.255 8344	1149	9.263 0053	1187	0.736 9947	9.992 8291	39	0	37
	10	9.255 9493	1148	9.263 1240	1188	0.736 8760	9.992 8252	38	50	
	20	9.256 0641	1149	9.263 2428	1187	0.736 7572	9.992 8214	39	40	
	30	9.256 1790	1148	9.263 3615	1186	0.736 6385	9.992 8175	39	30	
	40	9.256 2938	1147	9.263 4801	1186	0.736 5199	9.992 8136	38	20	
	50	9.256 4085	1148	9.263 5987	1186	0.736 4013	9.992 8098	39	10	
24	0	9.256 5233	1147	9.263 7173	1186	0.736 2827	9.992 8059	38	0	36
	10	9.256 6380	1146	9.263 8359	1186	0.736 1641	9.992 8021	39	50	
	20	9.256 7526	1147	9.263 9545	1185	0.736 0455	9.992 7982	39	40	
	30	9.256 8673	1146	9.264 0730	1184	0.735 9270	9.992 7943	38	30	
	40	9.256 9819	1146	9.264 1914	1185	0.735 8086	9.992 7905	39	20	
	50	9.257 0965	1145	9.264 3099	1184	0.735 6901	9.992 7866	39	10	
25	0	9.257 2110	1145	9.264 4283	1184	0.735 5717	9.992 7827	39	0	35
	10	9.257 3255	1145	9.264 5467	1184	0.735 4533	9.992 7788	38	50	
	20	9.257 4400	1145	9.264 6651	1183	0.735 3349	9.992 7750	39	40	
	30	9.257 5545	1144	9.264 7834	1183	0.735 2166	9.992 7711	39	30	
	40	9.257 6689	1144	9.264 9017	1183	0.735 0983	9.992 7672	38	20	
	50	9.257 7833	1144	9.265 0200	1182	0.734 9800	9.992 7634	39	10	
26	0	9.257 8977	1143	9.265 1382	1182	0.734 8618	9.992 7595	39	0	34
	10	9.258 0120	1143	9.265 2564	1182	0.734 7436	9.992 7556	39	50	
	20	9.258 1263	1143	9.265 3746	1181	0.734 6254	9.992 7517	39	40	
	30	9.258 2406	1142	9.265 4927	1181	0.734 5073	9.992 7478	38	30	
	40	9.258 3548	1142	9.265 6108	1181	0.734 3892	9.992 7440	39	20	
	50	9.258 4690	1142	9.265 7289	1181	0.734 2711	9.992 7401	39	10	
27	0	9.258 5832	1141	9.265 8470	1180	0.734 1530	9.992 7362	39	0	33
	10	9.258 6973	1141	9.265 9650	1180	0.734 0350	9.992 7323	39	50	
	20	9.258 8114	1141	9.266 0830	1180	0.733 9170	9.992 7284	39	40	
	30	9.258 9255	1141	9.266 2010	1179	0.733 7990	9.992 7245	38	30	
	40	9.259 0396	1140	9.266 3189	1179	0.733 6811	9.992 7207	39	20	
	50	9.259 1536	1140	9.266 4368	1179	0.733 5632	9.992 7168	39	10	
28	0	9.259 2676	1139	9.266 5547	1179	0.733 4453	9.992 7129	39	0	32
	10	9.259 3815	1140	9.266 6726	1178	0.733 3274	9.992 7090	39	50	
	20	9.259 4955	1139	9.266 7904	1178	0.733 2096	9.992 7051	39	40	
	30	9.259 6094	1138	9.266 9082	1177	0.733 0918	9.992 7012	39	30	
	40	9.259 7232	1139	9.267 0259	1178	0.732 9741	9.992 6973	39	20	
	50	9.259 8371	1138	9.267 1437	1176	0.732 8563	9.992 6934	39	10	
29	0	9.259 9509	1137	9.267 2613	1177	0.732 7387	9.992 6895	39	0	31
	10	9.260 0646	1138	9.267 3790	1177	0.732 6210	9.992 6856	39	50	
	20	9.260 1784	1137	9.267 4967	1176	0.732 5033	9.992 6817	39	40	
	30	9.260 2921	1137	9.267 6143	1175	0.732 3857	9.992 6778	39	30	
	40	9.260 4058	1136	9.267 7318	1176	0.732 2682	9.992 6739	39	20	
	50	9.260 5194	1136	9.267 8494	1175	0.732 1506	9.992 6700	39	10	
30	0	9.260 6330		9.267 9669		0.732 0331	9.992 6661		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

79°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.260 6330	1136	9.267 9669	1175	0.732 0331	9.992 6661	39	0	30
	10	9.260 7466	1136	9.268 0844	1175	0.731 9156	9.992 6622	39	50	
	20	9.260 8602	1135	9.268 2019	1174	0.731 7981	9.992 6583	39	40	
	30	9.260 9737	1135	9.268 3193	1174	0.731 6807	9.992 6544	39	30	
	40	9.261 0872	1135	9.268 4367	1174	0.731 5633	9.992 6505	39	20	
	50	9.261 2007	1134	9.268 5541	1173	0.731 4459	9.992 6466	39	10	
31	0	9.261 3141	1134	9.268 6714	1173	0.731 3286	9.992 6427	39	0	29
	10	9.261 4275	1134	9.268 7887	1173	0.731 2113	9.992 6388	39	50	
	20	9.261 5409	1133	9.268 9060	1173	0.731 0940	9.992 6349	39	40	
	30	9.261 6542	1133	9.269 0233	1172	0.730 9767	9.992 6310	40	30	
	40	9.261 7675	1133	9.269 1405	1172	0.730 8595	9.992 6270	39	20	
	50	9.261 8808	1133	9.269 2577	1172	0.730 7423	9.992 6231	39	10	
32	0	9.261 9941	1132	9.269 3749	1171	0.730 6251	9.992 6192	39	0	28
	10	9.262 1073	1132	9.269 4920	1171	0.730 5080	9.992 6153	39	50	
	20	9.262 2205	1131	9.269 6091	1171	0.730 3909	9.992 6114	39	40	
	30	9.262 3336	1132	9.269 7262	1170	0.730 2738	9.992 6075	40	30	
	40	9.262 4468	1131	9.269 8432	1170	0.730 1568	9.992 6035	39	20	
	50	9.262 5599	1130	9.269 9602	1170	0.730 0398	9.992 5996	39	10	
33	0	9.262 6729	1131	9.270 0772	1170	0.729 9228	9.992 5957	39	0	27
	10	9.262 7860	1130	9.270 1942	1169	0.729 8058	9.992 5918	39	50	
	20	9.262 8990	1130	9.270 3111	1169	0.729 6889	9.992 5879	40	40	
	30	9.263 0120	1129	9.270 4280	1169	0.729 5720	9.992 5839	39	30	
	40	9.263 1249	1129	9.270 5449	1168	0.729 4551	9.992 5800	39	20	
	50	9.263 2378	1129	9.270 6617	1169	0.729 3383	9.992 5761	39	10	
34	0	9.263 3507	1129	9.270 7786	1167	0.729 2214	9.992 5722	40	0	26
	10	9.263 4636	1128	9.270 8953	1168	0.729 1047	9.992 5682	39	50	
	20	9.263 5764	1128	9.271 0121	1167	0.728 9879	9.992 5643	39	40	
	30	9.263 6892	1128	9.271 1288	1167	0.728 8712	9.992 5604	40	30	
	40	9.263 8020	1127	9.271 2455	1167	0.728 7545	9.992 5564	39	20	
	50	9.263 9147	1127	9.271 3622	1166	0.728 6378	9.992 5525	39	10	
35	0	9.264 0274	1127	9.271 4788	1166	0.728 5212	9.992 5486	40	0	25
	10	9.264 1401	1126	9.271 5954	1166	0.728 4046	9.992 5446	39	50	
	20	9.264 2527	1126	9.271 7120	1166	0.728 2880	9.992 5407	39	40	
	30	9.264 3653	1126	9.271 8286	1165	0.728 1714	9.992 5368	40	30	
	40	9.264 4779	1126	9.271 9451	1165	0.728 0549	9.992 5328	39	20	
	50	9.264 5905	1125	9.272 0616	1164	0.727 9384	9.992 5289	39	10	
36	0	9.264 7030	1125	9.272 1780	1165	0.727 8220	9.992 5250	40	0	24
	10	9.264 8155	1124	9.272 2945	1164	0.727 7055	9.992 5210	39	50	
	20	9.264 9279	1125	9.272 4109	1163	0.727 5891	9.992 5171	40	40	
	30	9.265 0404	1124	9.272 5272	1164	0.727 4728	9.992 5131	39	30	
	40	9.265 1528	1123	9.272 6436	1163	0.727 3564	9.992 5092	40	20	
	50	9.265 2651	1124	9.272 7599	1163	0.727 2401	9.992 5052	39	10	
37	0	9.265 3775	1123	9.272 8762	1162	0.727 1238	9.992 5013	40	0	23
	10	9.265 4898	1123	9.272 9924	1163	0.727 0076	9.992 4973	39	50	
	20	9.265 6021	1122	9.273 1087	1162	0.726 8913	9.992 4934	40	40	
	30	9.265 7143	1122	9.273 2249	1162	0.726 7751	9.992 4894	39	30	
	40	9.265 8265	1122	9.273 3411	1161	0.726 6589	9.992 4855	40	20	
	50	9.265 9387	1122	9.273 4572	1161	0.726 5428	9.992 4815	39	10	
38	0	9.266 0509	1121	9.273 5733	1161	0.726 4267	9.992 4776	40	0	22
	10	9.266 1630	1121	9.273 6894	1161	0.726 3106	9.992 4736	39	50	
	20	9.266 2751	1121	9.273 8055	1160	0.726 1945	9.992 4697	40	40	
	30	9.266 3872	1120	9.273 9215	1160	0.726 0785	9.992 4657	39	30	
	40	9.266 4992	1121	9.274 0375	1159	0.725 9625	9.992 4618	40	20	
	50	9.266 6113	1119	9.274 1534	1160	0.725 8466	9.992 4578	39	10	
39	0	9.266 7232	1120	9.274 2694	1159	0.725 7306	9.992 4539	40	0	21
	10	9.266 8352	1119	9.274 3853	1159	0.725 6147	9.992 4499	40	50	
	20	9.266 9471	1119	9.274 5012	1158	0.725 4988	9.992 4459	39	40	
	30	9.267 0590	1119	9.274 6170	1159	0.725 3830	9.992 4420	40	30	
	40	9.267 1709	1118	9.274 7329	1158	0.725 2671	9.992 4380	40	20	
	50	9.267 2827	1118	9.274 8487	1157	0.725 1513	9.992 4340	39	10	
40	0	9.267 3945		9.274 9644		0.725 0356	9.992 4301		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	1150	1140	1130	1120	39	40
1	115	114	113	112	3.9	4.0
2	230	228	226	224	7.8	8.0
3	345	342	339	336	11.7	12.0
4	460	456	452	448	15.6	16.0
5	575	570	565	560	19.5	20.0
6	690	684	678	672	23.4	24.0
7	805	798	791	784	27.3	28.0
8	920	912	904	896	31.2	32.0
9	1035	1026	1017	1008	35.1	36.0

10°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.267 3945	1118	9.274 9644	1158	0.725 0356	9.992 4301	40	0	20
	10	9.267 5063	1117	9.275 0802	1157	0.724 9198	9.992 4261	40	50	
	20	9.267 6180	1117	9.275 1959	1157	0.724 8041	9.992 4221	39	40	
	30	9.267 7297	1117	9.275 3116	1156	0.724 6884	9.992 4182	40	30	
	40	9.267 8414	1117	9.275 4272	1156	0.724 5728	9.992 4142	40	20	
	50	9.267 9531	1116	9.275 5428	1156	0.724 4572	9.992 4102	39	10	
41	0	9.268 0647	1116	9.275 6584	1156	0.724 3416	9.992 4063	40	0	19
	10	9.268 1763	1116	9.275 7740	1155	0.724 2260	9.992 4023	40	50	
	20	9.268 2879	1115	9.275 8895	1155	0.724 1105	9.992 3983	40	40	
	30	9.268 3994	1115	9.276 0050	1155	0.723 9950	9.992 3943	39	30	
	40	9.268 5109	1115	9.276 1205	1155	0.723 8795	9.992 3904	40	20	
	50	9.268 6224	1114	9.276 2360	1154	0.723 7640	9.992 3864	40	10	
42	0	9.268 7338	1114	9.276 3514	1154	0.723 6486	9.992 3824	40	0	18
	10	9.268 8452	1114	9.276 4668	1154	0.723 5332	9.992 3784	39	50	
	20	9.268 9566	1114	9.276 5822	1153	0.723 4178	9.992 3745	40	40	
	30	9.269 0680	1113	9.276 6975	1153	0.723 3025	9.992 3705	40	30	
	40	9.269 1793	1113	9.276 8128	1153	0.723 1872	9.992 3665	40	20	
	50	9.269 2906	1113	9.276 9281	1153	0.723 0719	9.992 3625	40	10	
43	0	9.269 4019	1112	9.277 0434	1152	0.722 9566	9.992 3585	40	0	17
	10	9.269 5131	1112	9.277 1586	1152	0.722 8414	9.992 3545	39	50	
	20	9.269 6243	1112	9.277 2738	1151	0.722 7262	9.992 3506	40	40	
	30	9.269 7355	1112	9.277 3889	1152	0.722 6111	9.992 3466	40	30	
	40	9.269 8467	1111	9.277 5041	1151	0.722 4959	9.992 3426	40	20	
	50	9.269 9578	1111	9.277 6192	1151	0.722 3808	9.992 3386	40	10	
44	0	9.270 0689	1110	9.277 7343	1150	0.722 2657	9.992 3346	40	0	16
	10	9.270 1799	1111	9.277 8493	1151	0.722 1507	9.992 3306	40	50	
	20	9.270 2910	1110	9.277 9644	1149	0.722 0356	9.992 3266	40	40	
	30	9.270 4020	1109	9.278 0793	1150	0.721 9207	9.992 3226	40	30	
	40	9.270 5129	1110	9.278 1943	1150	0.721 8057	9.992 3186	40	20	
	50	9.270 6239	1109	9.278 3093	1149	0.721 6907	9.992 3146	40	10	
45	0	9.270 7348	1109	9.278 4242	1149	0.721 5758	9.992 3106	40	0	15
	10	9.270 8457	1108	9.278 5391	1148	0.721 4609	9.992 3066	40	50	
	20	9.270 9565	1109	9.278 6539	1148	0.721 3461	9.992 3026	40	40	
	30	9.271 0674	1108	9.278 7687	1148	0.721 2313	9.992 2986	40	30	
	40	9.271 1782	1107	9.278 8835	1148	0.721 1165	9.992 2946	40	20	
	50	9.271 2889	1108	9.278 9983	1148	0.721 0017	9.992 2906	40	10	
46	0	9.271 3997	1107	9.279 1131	1147	0.720 8869	9.992 2866	40	0	14
	10	9.271 5104	1107	9.279 2278	1147	0.720 7722	9.992 2826	40	50	
	20	9.271 6211	1106	9.279 3425	1146	0.720 6575	9.992 2786	40	40	
	30	9.271 7317	1106	9.279 4571	1146	0.720 5429	9.992 2746	40	30	
	40	9.271 8423	1106	9.279 5717	1146	0.720 4283	9.992 2706	40	20	
	50	9.271 9529	1106	9.279 6863	1146	0.720 3137	9.992 2666	40	10	
47	0	9.272 0635	1105	9.279 8009	1146	0.720 1991	9.992 2626	40	0	13
	10	9.272 1740	1105	9.279 9155	1145	0.720 0845	9.992 2586	40	50	
	20	9.272 2845	1105	9.280 0300	1145	0.719 9700	9.992 2546	40	40	
	30	9.272 3950	1105	9.280 1445	1144	0.719 8555	9.992 2506	41	30	
	40	9.272 5055	1104	9.280 2589	1145	0.719 7411	9.992 2465	40	20	
	50	9.272 6159	1104	9.280 3734	1144	0.719 6266	9.992 2425	40	10	
48	0	9.272 7263	1103	9.280 4878	1144	0.719 5122	9.992 2385	40	0	12
	10	9.272 8366	1104	9.280 6022	1143	0.719 3978	9.992 2345	40	50	
	20	9.272 9470	1103	9.280 7165	1143	0.719 2835	9.992 2305	40	40	
	30	9.273 0573	1102	9.280 8308	1143	0.719 1692	9.992 2265	41	30	
	40	9.273 1675	1103	9.280 9451	1143	0.719 0549	9.992 2224	40	20	
	50	9.273 2778	1102	9.281 0594	1142	0.718 9406	9.992 2184	40	10	
49	0	9.273 3880	1102	9.281 1736	1142	0.718 8264	9.992 2144	40	0	11
	10	9.273 4982	1102	9.281 2878	1142	0.718 7122	9.992 2104	41	50	
	20	9.273 6084	1101	9.281 4020	1142	0.718 5980	9.992 2063	40	40	
	30	9.273 7185	1101	9.281 5162	1141	0.718 4838	9.992 2023	40	30	
	40	9.273 8286	1101	9.281 6303	1141	0.718 3697	9.992 1983	40	20	
	50	9.273 9387	1100	9.281 7444	1141	0.718 2556	9.992 1943	41	10	
50	0	9.274 0487		9.281 8585		0.718 1415	9.992 1902		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	1150
1	115
2	230
3	345
4	460
5	575
6	690
7	805
8	920
9	1035

	1140
1	114
2	228
3	342
4	456
5	570
6	684
7	798
8	912
9	1026

	1130
1	113
2	226
3	339
4	452
5	565
6	678
7	791
8	904
9	1017

	1120
1	112
2	224
3	336
4	448
5	560
6	672
7	784
8	896
9	1008

	39
1	3.9
2	7.8
3	11.7
4	15.6
5	19.5
6	23.4
7	27.3
8	31.2
9	35.1

	40
1	4.0
2	8.0
3	12.0
4	16.0
5	20.0
6	24.0
7	28.0
8	32.0
9	36.0

79°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.274 0487	1100	9.281 8585	1140	0.718 1415	9.992 1902	40	0	10
	10	9.274 1587	1100	9.281 9725	1140	0.718 0275	9.992 1862	40	50	
	20	9.274 2687	1099	9.282 0865	1140	0.717 9135	9.992 1822	41	40	
	30	9.274 3786	1100	9.282 2005	1140	0.717 7995	9.992 1781	40	30	
	40	9.274 4886	1099	9.282 3145	1139	0.717 6855	9.992 1741	40	20	
	50	9.274 5985	1098	9.282 4284	1139	0.717 5716	9.992 1701	41	10	
51	0	9.274 7083	1099	9.282 5423	1139	0.717 4577	9.992 1660	40	0	9
	10	9.274 8182	1098	9.282 6562	1138	0.717 3438	9.992 1620	40	50	
	20	9.274 9280	1098	9.282 7700	1138	0.717 2300	9.992 1580	41	40	
	30	9.275 0378	1097	9.282 8838	1138	0.717 1162	9.992 1539	40	30	
	40	9.275 1475	1098	9.282 9976	1138	0.717 0024	9.992 1499	41	20	
	50	9.275 2573	1096	9.283 1114	1137	0.716 8886	9.992 1458	40	10	
52	0	9.275 3669	1097	9.283 2251	1137	0.716 7749	9.992 1418	40	0	8
	10	9.275 4766	1097	9.283 3388	1137	0.716 6612	9.992 1378	41	50	
	20	9.275 5863	1096	9.283 4525	1137	0.716 5475	9.992 1337	40	40	
	30	9.275 6959	1095	9.283 5662	1136	0.716 4338	9.992 1297	41	30	
	40	9.275 8054	1096	9.283 6798	1136	0.716 3202	9.992 1256	40	20	
	50	9.275 9150	1095	9.283 7934	1136	0.716 2066	9.992 1216	41	10	
53	0	9.276 0245	1095	9.283 9070	1135	0.716 0930	9.992 1175	40	0	7
	10	9.276 1340	1095	9.284 0205	1135	0.715 9795	9.992 1135	41	50	
	20	9.276 2435	1094	9.284 1340	1135	0.715 8660	9.992 1094	40	40	
	30	9.276 3529	1094	9.284 2475	1135	0.715 7525	9.992 1054	41	30	
	40	9.276 4623	1094	9.284 3610	1134	0.715 6390	9.992 1013	40	20	
	50	9.276 5717	1094	9.284 4744	1134	0.715 5256	9.992 0973	41	10	
54	0	9.276 6811	1093	9.284 5878	1134	0.715 4122	9.992 0932	40	0	6
	10	9.276 7904	1093	9.284 7012	1134	0.715 2988	9.992 0892	41	50	
	20	9.276 8997	1092	9.284 8146	1133	0.715 1854	9.992 0851	40	40	
	30	9.277 0089	1093	9.284 9279	1133	0.715 0721	9.992 0811	41	30	
	40	9.277 1182	1092	9.285 0412	1133	0.714 9588	9.992 0770	41	20	
	50	9.277 2274	1092	9.285 1545	1132	0.714 8455	9.992 0729	40	10	
55	0	9.277 3366	1091	9.285 2677	1132	0.714 7323	9.992 0689	41	0	5
	10	9.277 4457	1092	9.285 3809	1132	0.714 6191	9.992 0648	40	50	
	20	9.277 5549	1091	9.285 4941	1132	0.714 5059	9.992 0608	41	40	
	30	9.277 6640	1090	9.285 6073	1131	0.714 3927	9.992 0567	41	30	
	40	9.277 7730	1091	9.285 7204	1131	0.714 2796	9.992 0526	40	20	
	50	9.277 8821	1090	9.285 8335	1131	0.714 1665	9.992 0486	41	10	
56	0	9.277 9911	1090	9.285 9466	1130	0.714 0534	9.992 0445	41	0	4
	10	9.278 1001	1089	9.286 0596	1130	0.713 9404	9.992 0404	40	50	
	20	9.278 2090	1089	9.286 1726	1130	0.713 8274	9.992 0364	41	40	
	30	9.278 3179	1089	9.286 2856	1130	0.713 7144	9.992 0323	41	30	
	40	9.278 4268	1089	9.286 3986	1129	0.713 6014	9.992 0282	41	20	
	50	9.278 5357	1088	9.286 5115	1130	0.713 4885	9.992 0241	40	10	
57	0	9.278 6445	1088	9.286 6245	1128	0.713 3755	9.992 0201	41	0	3
	10	9.278 7533	1088	9.286 7373	1129	0.713 2627	9.992 0160	41	50	
	20	9.278 8621	1088	9.286 8502	1128	0.713 1498	9.992 0119	41	40	
	30	9.278 9709	1087	9.286 9630	1128	0.713 0370	9.992 0078	40	30	
	40	9.279 0796	1087	9.287 0758	1128	0.712 9242	9.992 0038	41	20	
	50	9.279 1883	1087	9.287 1886	1128	0.712 8114	9.991 9997	41	10	
58	0	9.279 2970	1086	9.287 3014	1127	0.712 6986	9.991 9956	41	0	2
	10	9.279 4056	1086	9.287 4141	1127	0.712 5859	9.991 9915	40	50	
	20	9.279 5142	1086	9.287 5268	1127	0.712 4732	9.991 9875	41	40	
	30	9.279 6228	1086	9.287 6395	1126	0.712 3605	9.991 9834	41	30	
	40	9.279 7314	1085	9.287 7521	1126	0.712 2479	9.991 9793	41	20	
	50	9.279 8399	1085	9.287 8647	1126	0.712 1353	9.991 9752	41	10	
59	0	9.279 9484	1085	9.287 9773	1126	0.712 0227	9.991 9711	41	0	1
	10	9.280 0569	1084	9.288 0899	1125	0.711 9101	9.991 9670	41	50	
	20	9.280 1653	1085	9.288 2024	1125	0.711 7976	9.991 9629	41	40	
	30	9.280 2738	1083	9.288 3149	1125	0.711 6851	9.991 9588	40	30	
	40	9.280 3821	1084	9.288 4274	1124	0.711 5726	9.991 9548	41	20	
	50	9.280 4905	1083	9.288 5398	1125	0.711 4602	9.991 9507	41	10	
60	0	9.280 5988		9.288 6523		0.711 3477	9.991 9466		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

	1110
1	111
2	222
3	333
4	444
5	555
6	666
7	777
8	888
9	999

	1100
1	110
2	220
3	330
4	440
5	550
6	660
7	770
8	880
9	990

	1090
1	109
2	218
3	327
4	436
5	545
6	654
7	763
8	872
9	981

	1080
1	108
2	216
3	324
4	432
5	540
6	648
7	756
8	864
9	972

	40
1	4.0
2	8.0
3	12.0
4	16.0
5	20.0
6	24.0
7	28.0
8	32.0
9	36.0

	41
1	4.1
2	8.2
3	12.3
4	16.4
5	20.5
6	24.6
7	28.7
8	32.8
9	36.9

11°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.280 5988	1084	9.288 6523	1124	0.711 3477	9.991 9466	41	0	60
	10	9.280 7072	1082	9.288 7647	1123	0.711 2353	9.991 9425	41	50	
	20	9.280 8154	1083	9.288 8770	1124	0.711 1230	9.991 9384	41	40	
	30	9.280 9237	1082	9.288 9894	1123	0.711 0106	9.991 9343	41	30	
	40	9.281 0319	1082	9.289 1017	1123	0.710 8983	9.991 9302	41	20	
	50	9.281 1401	1082	9.289 2140	1123	0.710 7860	9.991 9261	41	10	
1	0	9.281 2483	1081	9.289 3263	1122	0.710 6737	9.991 9220	41	0	59
	10	9.281 3564	1081	9.289 4385	1122	0.710 5615	9.991 9179	41	50	
	20	9.281 4645	1081	9.289 5507	1122	0.710 4493	9.991 9138	41	40	
	30	9.281 5726	1080	9.289 6629	1121	0.710 3371	9.991 9097	41	30	
	40	9.281 6806	1081	9.289 7750	1122	0.710 2250	9.991 9056	41	20	
	50	9.281 7887	1080	9.289 8872	1121	0.710 1128	9.991 9015	41	10	
2	0	9.281 8967	1079	9.289 9993	1121	0.710 0007	9.991 8974	41	0	58
	10	9.282 0046	1080	9.290 1114	1120	0.709 8886	9.991 8933	41	50	
	20	9.282 1126	1079	9.290 2234	1120	0.709 7766	9.991 8892	41	40	
	30	9.282 2205	1079	9.290 3354	1120	0.709 6646	9.991 8851	41	30	
	40	9.282 3284	1078	9.290 4474	1120	0.709 5526	9.991 8810	42	20	
	50	9.282 4362	1079	9.290 5594	1119	0.709 4406	9.991 8768	41	10	
3	0	9.282 5441	1078	9.290 6713	1119	0.709 3287	9.991 8727	41	0	57
	10	9.282 6519	1077	9.290 7832	1119	0.709 2168	9.991 8686	41	50	
	20	9.282 7596	1078	9.290 8951	1119	0.709 1049	9.991 8645	41	40	
	30	9.282 8674	1077	9.291 0070	1118	0.708 9930	9.991 8604	41	30	
	40	9.282 9751	1077	9.291 1188	1118	0.708 8812	9.991 8563	41	20	
	50	9.283 0828	1077	9.291 2306	1118	0.708 7694	9.991 8522	42	10	
4	0	9.283 1905	1076	9.291 3424	1118	0.708 6576	9.991 8480	41	0	56
	10	9.283 2981	1076	9.291 4542	1117	0.708 5458	9.991 8439	41	50	
	20	9.283 4057	1076	9.291 5659	1117	0.708 4341	9.991 8398	41	40	
	30	9.283 5133	1076	9.291 6776	1117	0.708 3224	9.991 8357	41	30	
	40	9.283 6209	1075	9.291 7893	1116	0.708 2107	9.991 8316	42	20	
	50	9.283 7284	1075	9.291 9009	1117	0.708 0991	9.991 8274	41	10	
5	0	9.283 8359	1074	9.292 0126	1116	0.707 9874	9.991 8233	41	0	55
	10	9.283 9433	1075	9.292 1242	1115	0.707 8758	9.991 8192	41	50	
	20	9.284 0508	1074	9.292 2357	1116	0.707 7643	9.991 8151	42	40	
	30	9.284 1582	1074	9.292 3473	1115	0.707 6527	9.991 8109	41	30	
	40	9.284 2656	1074	9.292 4588	1115	0.707 5412	9.991 8068	41	20	
	50	9.284 3730	1073	9.292 5703	1114	0.707 4297	9.991 8027	41	10	
6	0	9.284 4803	1073	9.292 6817	1115	0.707 3183	9.991 7986	42	0	54
	10	9.284 5876	1073	9.292 7932	1114	0.707 2068	9.991 7944	41	50	
	20	9.284 6949	1072	9.292 9046	1114	0.707 0954	9.991 7903	41	40	
	30	9.284 8021	1072	9.293 0160	1113	0.706 9840	9.991 7862	42	30	
	40	9.284 9093	1072	9.293 1273	1114	0.706 8727	9.991 7820	41	20	
	50	9.285 0165	1072	9.293 2387	1113	0.706 7613	9.991 7779	42	10	
7	0	9.285 1237	1071	9.293 3500	1112	0.706 6500	9.991 7737	41	0	53
	10	9.285 2308	1072	9.293 4612	1113	0.706 5388	9.991 7696	41	50	
	20	9.285 3380	1070	9.293 5725	1112	0.706 4275	9.991 7655	42	40	
	30	9.285 4450	1071	9.293 6837	1112	0.706 3163	9.991 7613	41	30	
	40	9.285 5521	1070	9.293 7949	1112	0.706 2051	9.991 7572	42	20	
	50	9.285 6591	1070	9.293 9061	1111	0.706 0939	9.991 7530	41	10	
8	0	9.285 7661	1070	9.294 0172	1112	0.705 9828	9.991 7489	41	0	52
	10	9.285 8731	1070	9.294 1284	1110	0.705 8716	9.991 7448	42	50	
	20	9.285 9801	1069	9.294 2394	1111	0.705 7606	9.991 7406	41	40	
	30	9.286 0870	1069	9.294 3505	1111	0.705 6495	9.991 7365	42	30	
	40	9.286 1939	1068	9.294 4616	1110	0.705 5384	9.991 7323	41	20	
	50	9.286 3007	1069	9.294 5726	1110	0.705 4274	9.991 7282	42	10	
9	0	9.286 4076	1068	9.294 6836	1109	0.705 3164	9.991 7240	41	0	51
	10	9.286 5144	1068	9.294 7945	1110	0.705 2055	9.991 7199	42	50	
	20	9.286 6212	1067	9.294 9055	1109	0.705 0945	9.991 7157	41	40	
	30	9.286 7279	1068	9.295 0164	1109	0.704 9836	9.991 7116	42	30	
	40	9.286 8347	1067	9.295 1273	1108	0.704 8727	9.991 7074	41	20	
	50	9.286 9414	1066	9.295 2381	1108	0.704 7619	9.991 7033	42	10	
10	0	9.287 0480		9.295 3489		0.704 6511	9.991 6991		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

78°

	1120
1	112
2	224
3	336
4	448
5	560
6	672
7	784
8	896
9	1008

	1110
1	111
2	222
3	333
4	444
5	555
6	666
7	777
8	888
9	999

	1100
1	110
2	220
3	330
4	440
5	550
6	660
7	770
8	880
9	990

	1090
1	109
2	218
3	327
4	436
5	545
6	654
7	763
8	872
9	981

	41
1	4.1
2	8.2
3	12.3
4	16.4
5	20.5
6	24.6
7	28.7
8	32.8
9	36.9

	42
1	4.2
2	8.4
3	12.6
4	16.8
5	21.0
6	25.2
7	29.4
8	33.6
9	37.8

11°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.287 0480	1067	9.295 3489	1108	0.704 6511	9.991 6991	42	0	50
	10	9.287 1547	1066	9.295 4597	1108	0.704 5403	9.991 6949	41	50	
	20	9.287 2613	1066	9.295 5705	1108	0.704 4295	9.991 6908	42	40	
	30	9.287 3679	1066	9.295 6813	1107	0.704 3187	9.991 6866	41	30	
	40	9.287 4745	1065	9.295 7920	1107	0.704 2080	9.991 6825	42	20	
	50	9.287 5810	1065	9.295 9027	1107	0.704 0973	9.991 6783	42	10	
11	0	9.287 6875	1065	9.296 0134	1106	0.703 9866	9.991 6741	41	0	49
	10	9.287 7940	1065	9.296 1240	1107	0.703 8760	9.991 6700	42	50	
	20	9.287 9005	1064	9.296 2347	1106	0.703 7653	9.991 6658	41	40	
	30	9.288 0069	1064	9.296 3453	1105	0.703 6547	9.991 6617	42	30	
	40	9.288 1133	1064	9.296 4558	1106	0.703 5442	9.991 6575	42	20	
	50	9.288 2197	1063	9.296 5664	1105	0.703 4336	9.991 6533	41	10	
12	0	9.288 3260	1064	9.296 6769	1105	0.703 3231	9.991 6492	42	0	48
	10	9.288 4324	1063	9.296 7874	1104	0.703 2126	9.991 6450	42	50	
	20	9.288 5387	1062	9.296 8978	1105	0.703 1022	9.991 6408	42	40	
	30	9.288 6449	1063	9.297 0083	1104	0.702 9917	9.991 6366	41	30	
	40	9.288 7512	1062	9.297 1187	1104	0.702 8813	9.991 6325	42	20	
	50	9.288 8574	1062	9.297 2291	1104	0.702 7709	9.991 6283	42	10	
13	0	9.288 9636	1061	9.297 3395	1103	0.702 6605	9.991 6241	42	0	47
	10	9.289 0697	1062	9.297 4498	1103	0.702 5502	9.991 6199	41	50	
	20	9.289 1759	1061	9.297 5601	1103	0.702 4399	9.991 6158	42	40	
	30	9.289 2820	1061	9.297 6704	1102	0.702 3296	9.991 6116	42	30	
	40	9.289 3881	1060	9.297 7806	1103	0.702 2194	9.991 6074	42	20	
	50	9.289 4941	1060	9.297 8909	1102	0.702 1091	9.991 6032	42	10	
14	0	9.289 6001	1060	9.298 0011	1102	0.701 9989	9.991 5990	41	0	46
	10	9.289 7061	1060	9.298 1113	1101	0.701 8887	9.991 5949	42	50	
	20	9.289 8121	1060	9.298 2214	1102	0.701 7786	9.991 5907	42	40	
	30	9.289 9181	1059	9.298 3316	1101	0.701 6684	9.991 5865	42	30	
	40	9.290 0240	1059	9.298 4417	1100	0.701 5583	9.991 5823	42	20	
	50	9.290 1299	1058	9.298 5517	1101	0.701 4483	9.991 5781	42	10	
15	0	9.290 2357	1059	9.298 6618	1100	0.701 3382	9.991 5739	41	0	45
	10	9.290 3416	1058	9.298 7718	1100	0.701 2282	9.991 5698	42	50	
	20	9.290 4474	1058	9.298 8818	1100	0.701 1182	9.991 5656	42	40	
	30	9.290 5532	1057	9.298 9918	1099	0.701 0082	9.991 5614	42	30	
	40	9.290 6589	1057	9.299 1017	1100	0.700 8983	9.991 5572	42	20	
	50	9.290 7646	1058	9.299 2117	1099	0.700 7883	9.991 5530	42	10	
16	0	9.290 8704	1056	9.299 3216	1098	0.700 6784	9.991 5488	42	0	44
	10	9.290 9760	1057	9.299 4314	1099	0.700 5686	9.991 5446	42	50	
	20	9.291 0817	1056	9.299 5413	1098	0.700 4587	9.991 5404	42	40	
	30	9.291 1873	1056	9.299 6511	1098	0.700 3489	9.991 5362	42	30	
	40	9.291 2929	1056	9.299 7609	1098	0.700 2391	9.991 5320	42	20	
	50	9.291 3985	1055	9.299 8707	1097	0.700 1293	9.991 5278	42	10	
17	0	9.291 5040	1055	9.299 9804	1097	0.700 0196	9.991 5236	42	0	43
	10	9.291 6095	1055	9.300 0901	1097	0.699 9099	9.991 5194	42	50	
	20	9.291 7150	1055	9.300 1998	1097	0.699 8002	9.991 5152	42	40	
	30	9.291 8205	1054	9.300 3095	1096	0.699 6905	9.991 5110	42	30	
	40	9.291 9259	1054	9.300 4191	1097	0.699 5809	9.991 5068	42	20	
	50	9.292 0313	1054	9.300 5288	1095	0.699 4712	9.991 5026	42	10	
18	0	9.292 1367	1054	9.300 6383	1096	0.699 3617	9.991 4984	42	0	42
	10	9.292 2421	1053	9.300 7479	1095	0.699 2521	9.991 4942	42	50	
	20	9.292 3474	1053	9.300 8574	1096	0.699 1426	9.991 4900	42	40	
	30	9.292 4527	1053	9.300 9670	1094	0.699 0330	9.991 4858	43	30	
	40	9.292 5580	1052	9.301 0764	1095	0.698 9236	9.991 4815	42	20	
	50	9.292 6632	1053	9.301 1859	1095	0.698 8141	9.991 4773	42	10	
19	0	9.292 7685	1052	9.301 2954	1094	0.698 7046	9.991 4731	42	0	41
	10	9.292 8737	1051	9.301 4048	1094	0.698 5952	9.991 4689	42	50	
	20	9.292 9788	1052	9.301 5142	1093	0.698 4858	9.991 4647	42	40	
	30	9.293 0840	1051	9.301 6235	1093	0.698 3765	9.991 4605	42	30	
	40	9.293 1891	1051	9.301 7328	1094	0.698 2672	9.991 4563	43	20	
	50	9.293 2942	1051	9.301 8422	1092	0.698 1578	9.991 4520	42	10	
20	0	9.293 3993		9.301 9514		0.698 0486	9.991 4478		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

78°

1080	
1	108
2	216
3	324
4	432
5	540
6	648
7	756
8	864
9	972

1070	
1	107
2	214
3	321
4	428
5	535
6	642
7	749
8	856
9	963

1060	
1	106
2	212
3	318
4	424
5	530
6	636
7	742
8	848
9	954

1050	
1	105
2	210
3	315
4	420
5	525
6	630
7	735
8	840
9	945

42	
1	4.2
2	8.4
3	12.6
4	16.8
5	21.0
6	25.2
7	29.4
8	33.6
9	37.8

43	
1	4.3
2	8.6
3	12.9
4	17.2
5	21.5
6	25.8
7	30.1
8	34.4
9	38.7

11°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.293 3993	1050	9.301 9514	1093	0.698 0486	9.991 4478	42	0	40
	10	9.293 5043	1050	9.302 0607	1092	0.697 9393	9.991 4436	42	50	
	20	9.293 6093	1050	9.302 1699	1092	0.697 8301	9.991 4394	42	40	
	30	9.293 7143	1050	9.302 2791	1092	0.697 7209	9.991 4352	43	30	
	40	9.293 8193	1049	9.302 3883	1092	0.697 6117	9.991 4309	42	20	
	50	9.293 9242	1049	9.302 4975	1091	0.697 5025	9.991 4267	42	10	
21	0	9.294 0291	1049	9.302 6066	1091	0.697 3934	9.991 4225	42	0	39
	10	9.294 1340	1048	9.302 7157	1091	0.697 2843	9.991 4183	43	50	
	20	9.294 2388	1049	9.302 8248	1091	0.697 1752	9.991 4140	42	40	
	30	9.294 3437	1048	9.302 9339	1090	0.697 0661	9.991 4098	42	30	
	40	9.294 4485	1047	9.303 0429	1090	0.696 9571	9.991 4056	43	20	
	50	9.294 5532	1048	9.303 1519	1090	0.696 8481	9.991 4013	42	10	
22	0	9.294 6580	1047	9.303 2609	1090	0.696 7391	9.991 3971	42	0	38
	10	9.294 7627	1047	9.303 3699	1089	0.696 6301	9.991 3929	43	50	
	20	9.294 8674	1047	9.303 4788	1089	0.696 5212	9.991 3886	42	40	
	30	9.294 9721	1046	9.303 5877	1089	0.696 4123	9.991 3844	42	30	
	40	9.295 0767	1047	9.303 6966	1088	0.696 3034	9.991 3802	43	20	
	50	9.295 1814	1045	9.303 8054	1089	0.696 1946	9.991 3759	42	10	
23	0	9.295 2859	1046	9.303 9143	1088	0.696 0857	9.991 3717	43	0	37
	10	9.295 3905	1045	9.304 0231	1087	0.695 9769	9.991 3674	42	50	
	20	9.295 4950	1046	9.304 1318	1088	0.695 8682	9.991 3632	42	40	
	30	9.295 5996	1045	9.304 2406	1087	0.695 7594	9.991 3590	43	30	
	40	9.295 7041	1044	9.304 3493	1087	0.695 6507	9.991 3547	42	20	
	50	9.295 8085	1044	9.304 4580	1087	0.695 5420	9.991 3505	43	10	
24	0	9.295 9129	1045	9.304 5667	1087	0.695 4333	9.991 3462	42	0	36
	10	9.296 0174	1043	9.304 6754	1086	0.695 3246	9.991 3420	43	50	
	20	9.296 1217	1044	9.304 7840	1086	0.695 2160	9.991 3377	42	40	
	30	9.296 2261	1043	9.304 8926	1086	0.695 1074	9.991 3335	43	30	
	40	9.296 3304	1043	9.305 0012	1085	0.694 9988	9.991 3292	42	20	
	50	9.296 4347	1043	9.305 1097	1086	0.694 8903	9.991 3250	43	10	
25	0	9.296 5390	1043	9.305 2183	1085	0.694 7817	9.991 3207	42	0	35
	10	9.296 6433	1042	9.305 3268	1085	0.694 6732	9.991 3165	43	50	
	20	9.296 7475	1042	9.305 4353	1084	0.694 5647	9.991 3122	42	40	
	30	9.296 8517	1042	9.305 5437	1084	0.694 4563	9.991 3080	43	30	
	40	9.296 9559	1041	9.305 6521	1084	0.694 3479	9.991 3037	42	20	
	50	9.297 0600	1041	9.305 7605	1084	0.694 2395	9.991 2995	43	10	
26	0	9.297 1641	1041	9.305 8689	1084	0.694 1311	9.991 2952	42	0	34
	10	9.297 2682	1041	9.305 9773	1083	0.694 0227	9.991 2910	43	50	
	20	9.297 3723	1040	9.306 0856	1083	0.693 9144	9.991 2867	43	40	
	30	9.297 4763	1041	9.306 1939	1083	0.693 8061	9.991 2824	42	30	
	40	9.297 5804	1040	9.306 3022	1083	0.693 6978	9.991 2782	43	20	
	50	9.297 6844	1039	9.306 4105	1082	0.693 5895	9.991 2739	43	10	
27	0	9.297 7883	1040	9.306 5187	1082	0.693 4813	9.991 2696	42	0	33
	10	9.297 8923	1039	9.306 6269	1082	0.693 3731	9.991 2654	43	50	
	20	9.297 9962	1039	9.306 7351	1081	0.693 2649	9.991 2611	43	40	
	30	9.298 1001	1038	9.306 8432	1082	0.693 1568	9.991 2568	42	30	
	40	9.298 2039	1039	9.306 9514	1081	0.693 0486	9.991 2526	43	20	
	50	9.298 3078	1038	9.307 0595	1080	0.692 9405	9.991 2483	43	10	
28	0	9.298 4116	1038	9.307 1675	1081	0.692 8325	9.991 2440	42	0	32
	10	9.298 5154	1037	9.307 2756	1080	0.692 7244	9.991 2398	43	50	
	20	9.298 6191	1038	9.307 3836	1080	0.692 6164	9.991 2355	43	40	
	30	9.298 7229	1037	9.307 4916	1080	0.692 5084	9.991 2312	43	30	
	40	9.298 8266	1037	9.307 5996	1080	0.692 4004	9.991 2269	42	20	
	50	9.298 9303	1036	9.307 7076	1079	0.692 2924	9.991 2227	43	10	
29	0	9.299 0339	1036	9.307 8155	1079	0.692 1845	9.991 2184	43	0	31
	10	9.299 1375	1036	9.307 9234	1079	0.692 0766	9.991 2141	43	50	
	20	9.299 2411	1036	9.308 0313	1079	0.691 9687	9.991 2098	42	40	
	30	9.299 3447	1036	9.308 1392	1078	0.691 8608	9.991 2056	43	30	
	40	9.299 4483	1035	9.308 2470	1078	0.691 7530	9.991 2013	43	20	
	50	9.299 5518	1035	9.308 3548	1078	0.691 6452	9.991 1970	43	10	
30	0	9.299 6553		9.308 4626		0.691 5374	9.991 1927		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

78°

	1090
1	109
2	218
3	327
4	436
5	545
6	654
7	763
8	872
9	981

	1080
1	108
2	216
3	324
4	432
5	540
6	648
7	756
8	864
9	972

	1070
1	107
2	214
3	321
4	428
5	535
6	642
7	749
8	856
9	963

	1060
1	106
2	212
3	318
4	424
5	530
6	636
7	742
8	848
9	954

	42
1	4.2
2	8.4
3	12.6
4	16.8
5	21.0
6	25.2
7	29.4
8	33.6
9	37.8

	43
1	4.3
2	8.6
3	12.9
4	17.2
5	21.5
6	25.8
7	30.1
8	34.4
9	38.7

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.299 6553	1035	9.308 4626	1078	0.691 5374	9.991 1927	43	0	30
	10	9.299 7588	1034	9.308 5704	1077	0.691 4296	9.991 1884	43	50	
	20	9.299 8622	1035	9.308 6781	1077	0.691 3219	9.991 1841	42	40	
	30	9.299 9657	1034	9.308 7858	1077	0.691 2142	9.991 1799	43	30	
	40	9.300 0691	1033	9.308 8935	1077	0.691 1065	9.991 1756	43	20	
	50	9.300 1724	1034	9.309 0012	1076	0.690 9988	9.991 1713	43	10	
31	0	9.300 2758	1033	9.309 1088	1076	0.690 8912	9.991 1670	43	0	29
	10	9.300 3791	1033	9.309 2164	1076	0.690 7836	9.991 1627	43	50	
	20	9.300 4824	1033	9.309 3240	1076	0.690 6760	9.991 1584	43	40	
	30	9.300 5857	1032	9.309 4316	1075	0.690 5684	9.991 1541	43	30	
	40	9.300 6889	1032	9.309 5391	1075	0.690 4609	9.991 1498	43	20	
	50	9.300 7921	1032	9.309 6466	1075	0.690 3534	9.991 1455	43	10	
32	0	9.300 8953	1032	9.309 7541	1075	0.690 2459	9.991 1412	43	0	28
	10	9.300 9985	1032	9.309 8616	1074	0.690 1384	9.991 1369	43	50	
	20	9.301 1017	1031	9.309 9690	1074	0.690 0310	9.991 1326	43	40	
	30	9.301 2048	1031	9.310 0764	1074	0.689 9236	9.991 1283	43	30	
	40	9.301 3079	1030	9.310 1838	1074	0.689 8162	9.991 1240	43	20	
	50	9.301 4109	1031	9.310 2912	1073	0.689 7088	9.991 1197	43	10	
33	0	9.301 5140	1030	9.310 3985	1074	0.689 6015	9.991 1154	43	0	27
	10	9.301 6170	1030	9.310 5059	1073	0.689 4941	9.991 1111	43	50	
	20	9.301 7200	1029	9.310 6132	1072	0.689 3868	9.991 1068	43	40	
	30	9.301 8229	1030	9.310 7204	1073	0.689 2796	9.991 1025	43	30	
	40	9.301 9259	1029	9.310 8277	1072	0.689 1723	9.991 0982	43	20	
	50	9.302 0288	1029	9.310 9349	1072	0.689 0651	9.991 0939	43	10	
34	0	9.302 1317	1029	9.311 0421	1072	0.688 9579	9.991 0896	43	0	26
	10	9.302 2346	1028	9.311 1493	1071	0.688 8507	9.991 0853	43	50	
	20	9.302 3374	1028	9.311 2564	1071	0.688 7436	9.991 0810	43	40	
	30	9.302 4402	1028	9.311 3635	1071	0.688 6365	9.991 0767	44	30	
	40	9.302 5430	1028	9.311 4706	1071	0.688 5294	9.991 0723	43	20	
	50	9.302 6458	1027	9.311 5777	1071	0.688 4223	9.991 0680	43	10	
35	0	9.302 7485	1027	9.311 6848	1070	0.688 3152	9.991 0637	43	0	25
	10	9.302 8512	1027	9.311 7918	1070	0.688 2082	9.991 0594	43	50	
	20	9.302 9539	1027	9.311 8988	1070	0.688 1012	9.991 0551	43	40	
	30	9.303 0566	1026	9.312 0058	1069	0.687 9942	9.991 0508	44	30	
	40	9.303 1592	1026	9.312 1127	1070	0.687 8873	9.991 0464	43	20	
	50	9.303 2618	1026	9.312 2197	1069	0.687 7803	9.991 0421	43	10	
36	0	9.303 3644	1025	9.312 3266	1069	0.687 6734	9.991 0378	43	0	24
	10	9.303 4669	1026	9.312 4335	1068	0.687 5665	9.991 0335	43	50	
	20	9.303 5695	1025	9.312 5403	1069	0.687 4597	9.991 0292	44	40	
	30	9.303 6720	1025	9.312 6472	1068	0.687 3528	9.991 0248	43	30	
	40	9.303 7745	1024	9.312 7540	1068	0.687 2460	9.991 0205	43	20	
	50	9.303 8769	1025	9.312 8608	1067	0.687 1392	9.991 0162	43	10	
37	0	9.303 9794	1024	9.312 9675	1068	0.687 0325	9.991 0119	44	0	23
	10	9.304 0818	1024	9.313 0743	1067	0.686 9257	9.991 0075	43	50	
	20	9.304 1842	1023	9.313 1810	1067	0.686 8190	9.991 0032	43	40	
	30	9.304 2865	1024	9.313 2877	1066	0.686 7123	9.990 9989	44	30	
	40	9.304 3889	1023	9.313 3943	1067	0.686 6057	9.990 9945	43	20	
	50	9.304 4912	1022	9.313 5010	1066	0.686 4990	9.990 9902	43	10	
38	0	9.304 5934	1023	9.313 6076	1066	0.686 3924	9.990 9859	44	0	22
	10	9.304 6957	1022	9.313 7142	1065	0.686 2858	9.990 9815	43	50	
	20	9.304 7979	1022	9.313 8207	1066	0.686 1793	9.990 9772	43	40	
	30	9.304 9001	1022	9.313 9273	1065	0.686 0727	9.990 9729	44	30	
	40	9.305 0023	1022	9.314 0338	1065	0.685 9662	9.990 9685	43	20	
	50	9.305 1045	1021	9.314 1403	1065	0.685 8597	9.990 9642	44	10	
39	0	9.305 2066	1021	9.314 2468	1064	0.685 7532	9.990 9598	43	0	21
	10	9.305 3087	1021	9.314 3532	1065	0.685 6468	9.990 9555	43	50	
	20	9.305 4108	1021	9.314 4597	1064	0.685 5403	9.990 9512	44	40	
	30	9.305 5129	1020	9.314 5661	1063	0.685 4339	9.990 9468	43	30	
	40	9.305 6149	1020	9.314 6724	1064	0.685 3276	9.990 9425	44	20	
	50	9.305 7169	1020	9.314 7788	1063	0.685 2212	9.990 9381	43	10	
40	0	9.305 8189		9.314 8851		0.685 1149	9.990 9338		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

	1050
1	105
2	210
3	315
4	420
5	525
6	630
7	735
8	840
9	945

	1040
1	104
2	208
3	312
4	416
5	520
6	624
7	728
8	832
9	936

	1030
1	103
2	206
3	309
4	412
5	515
6	618
7	721
8	824
9	927

	1020
1	102
2	204
3	306
4	408
5	510
6	612
7	714
8	816
9	918

	43
1	4.3
2	8.6
3	12.9
4	17.2
5	21.5
6	25.8
7	30.1
8	34.4
9	38.7

	44
1	4.4
2	8.8
3	13.2
4	17.6
5	22.0
6	26.4
7	30.8
8	35.2
9	39.6

11°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.305 8189	1020	9.314 8851	1063	0.685 1149	9.990 9338	44	0	20
	10	9.305 9209	1019	9.314 9914	1063	0.685 0086	9.990 9294	43	50	
	20	9.306 0228	1019	9.315 0977	1063	0.684 9023	9.990 9251	44	40	
	30	9.306 1247	1019	9.315 2040	1062	0.684 7960	9.990 9207	43	30	
	40	9.306 2266	1018	9.315 3102	1062	0.684 6898	9.990 9164	44	20	
	50	9.306 3284	1019	9.315 4164	1062	0.684 5836	9.990 9120	43	10	
41	0	9.306 4303	1018	9.315 5226	1062	0.684 4774	9.990 9077	44	0	19
	10	9.306 5321	1018	9.315 6288	1061	0.684 3712	9.990 9033	43	50	
	20	9.306 6339	1017	9.315 7349	1061	0.684 2651	9.990 8990	44	40	
	30	9.306 7356	1017	9.315 8410	1061	0.684 1590	9.990 8946	44	30	
	40	9.306 8373	1018	9.315 9471	1061	0.684 0529	9.990 8902	43	20	
	50	9.306 9391	1016	9.316 0532	1060	0.683 9468	9.990 8859	44	10	
42	0	9.307 0407	1017	9.316 1592	1060	0.683 8408	9.990 8815	43	0	18
	10	9.307 1424	1016	9.316 2652	1060	0.683 7348	9.990 8772	44	50	
	20	9.307 2440	1016	9.316 3712	1060	0.683 6288	9.990 8728	44	40	
	30	9.307 3456	1016	9.316 4772	1060	0.683 5228	9.990 8684	43	30	
	40	9.307 4472	1016	9.316 5832	1059	0.683 4168	9.990 8641	44	20	
	50	9.307 5488	1015	9.316 6891	1059	0.683 3109	9.990 8597	44	10	
43	0	9.307 6503	1015	9.316 7950	1059	0.683 2050	9.990 8553	43	0	17
	10	9.307 7518	1015	9.316 9009	1058	0.683 0991	9.990 8510	44	50	
	20	9.307 8533	1015	9.317 0067	1058	0.682 9933	9.990 8466	44	40	
	30	9.307 9548	1014	9.317 1125	1059	0.682 8875	9.990 8422	43	30	
	40	9.308 0562	1014	9.317 2184	1057	0.682 7816	9.990 8379	44	20	
	50	9.308 1576	1014	9.317 3241	1058	0.682 6759	9.990 8335	44	10	
44	0	9.308 2590	1014	9.317 4299	1057	0.682 5701	9.990 8291	44	0	16
	10	9.308 3604	1013	9.317 5356	1057	0.682 4644	9.990 8247	43	50	
	20	9.308 4617	1013	9.317 6413	1057	0.682 3587	9.990 8204	44	40	
	30	9.308 5630	1013	9.317 7470	1057	0.682 2530	9.990 8160	44	30	
	40	9.308 6643	1013	9.317 8527	1056	0.682 1473	9.990 8116	44	20	
	50	9.308 7656	1012	9.317 9583	1057	0.682 0417	9.990 8072	43	10	
45	0	9.308 8668	1012	9.318 0640	1056	0.681 9360	9.990 8029	44	0	15
	10	9.308 9680	1012	9.318 1696	1055	0.681 8304	9.990 7985	44	50	
	20	9.309 0692	1012	9.318 2751	1056	0.681 7249	9.990 7941	44	40	
	30	9.309 1704	1011	9.318 3807	1055	0.681 6193	9.990 7897	44	30	
	40	9.309 2715	1011	9.318 4862	1055	0.681 5138	9.990 7853	43	20	
	50	9.309 3726	1011	9.318 5917	1055	0.681 4083	9.990 7810	44	10	
46	0	9.309 4737	1011	9.318 6972	1054	0.681 3028	9.990 7766	44	0	14
	10	9.309 5748	1011	9.318 8026	1055	0.681 1974	9.990 7722	44	50	
	20	9.309 6759	1010	9.318 9081	1054	0.681 0919	9.990 7678	44	40	
	30	9.309 7769	1010	9.319 0135	1053	0.680 9865	9.990 7634	44	30	
	40	9.309 8779	1009	9.319 1188	1054	0.680 8812	9.990 7590	44	20	
	50	9.309 9788	1010	9.319 2242	1053	0.680 7758	9.990 7546	44	10	
47	0	9.310 0798	1009	9.319 3295	1054	0.680 6705	9.990 7502	44	0	13
	10	9.310 1807	1009	9.319 4349	1052	0.680 5651	9.990 7458	44	50	
	20	9.310 2816	1009	9.319 5401	1053	0.680 4599	9.990 7414	43	40	
	30	9.310 3825	1008	9.319 6454	1053	0.680 3546	9.990 7371	44	30	
	40	9.310 4833	1008	9.319 7507	1052	0.680 2493	9.990 7327	44	20	
	50	9.310 5841	1008	9.319 8559	1052	0.680 1441	9.990 7283	44	10	
48	0	9.310 6849	1008	9.319 9611	1051	0.680 0389	9.990 7239	44	0	12
	10	9.310 7857	1007	9.320 0662	1052	0.679 9338	9.990 7195	44	50	
	20	9.310 8864	1008	9.320 1714	1051	0.679 8286	9.990 7151	44	40	
	30	9.310 9872	1007	9.320 2765	1051	0.679 7235	9.990 7107	44	30	
	40	9.311 0879	1007	9.320 3816	1051	0.679 6184	9.990 7063	44	20	
	50	9.311 1886	1006	9.320 4867	1051	0.679 5133	9.990 7019	45	10	
49	0	9.311 2892	1006	9.320 5918	1050	0.679 4082	9.990 6974	44	0	11
	10	9.311 3898	1006	9.320 6968	1050	0.679 3032	9.990 6930	44	50	
	20	9.311 4904	1006	9.320 8018	1050	0.679 1982	9.990 6886	44	40	
	30	9.311 5910	1006	9.320 9068	1049	0.679 0932	9.990 6842	44	30	
	40	9.311 6916	1005	9.321 0117	1050	0.678 9883	9.990 6798	44	20	
	50	9.311 7921	1005	9.321 1167	1049	0.678 8833	9.990 6754	44	10	
50	0	9.311 8926		9.321 2216		0.678 7784	9.990 6710		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

78°

	1060
1	106
2	212
3	318
4	424
5	530
6	636
7	742
8	848
9	954

	1050
1	105
2	210
3	315
4	420
5	525
6	630
7	735
8	840
9	945

	1040
1	104
2	208
3	312
4	416
5	520
6	624
7	728
8	832
9	936

	1030
1	103
2	206
3	309
4	412
5	515
6	618
7	721
8	824
9	927

	43
1	4.3
2	8.6
3	12.9
4	17.2
5	21.5
6	25.8
7	30.1
8	34.4
9	38.7

	44
1	4.4
2	8.8
3	13.2
4	17.6
5	22.0
6	26.4
7	30.8
8	35.2
9	39.6

11°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.311 8926	1005	9.321 2216	1049	0.678 7784	9.990 6710	44	0	10
	10	9.311 9931	1004	9.321 3265	1049	0.678 6735	9.990 6666	44	50	
	20	9.312 0935	1005	9.321 4314	1048	0.678 5686	9.990 6622	44	40	
	30	9.312 1940	1004	9.321 5362	1048	0.678 4638	9.990 6578	45	30	
	40	9.312 2944	1004	9.321 6410	1048	0.678 3590	9.990 6533	44	20	
	50	9.312 3948	1003	9.321 7458	1048	0.678 2542	9.990 6489	44	10	
51	0	9.312 4951	1004	9.321 8506	1048	0.678 1494	9.990 6445	44	0	9
	10	9.312 5955	1003	9.321 9554	1047	0.678 0446	9.990 6401	44	50	
	20	9.312 6958	1003	9.322 0601	1047	0.677 9399	9.990 6357	44	40	
	30	9.312 7961	1002	9.322 1648	1047	0.677 8352	9.990 6313	45	30	
	40	9.312 8963	1003	9.322 2695	1047	0.677 7305	9.990 6268	44	20	
	50	9.312 9966	1002	9.322 3742	1046	0.677 6258	9.990 6224	44	10	
52	0	9.313 0968	1002	9.322 4788	1046	0.677 5212	9.990 6180	44	0	8
	10	9.313 1970	1001	9.322 5834	1046	0.677 4166	9.990 6136	45	50	
	20	9.313 2971	1002	9.322 6880	1046	0.677 3120	9.990 6091	44	40	
	30	9.313 3973	1001	9.322 7926	1045	0.677 2074	9.990 6047	44	30	
	40	9.313 4974	1001	9.322 8971	1045	0.677 1029	9.990 6003	44	20	
	50	9.313 5975	1001	9.323 0016	1045	0.676 9984	9.990 5959	45	10	
53	0	9.313 6976	1000	9.323 1061	1045	0.676 8939	9.990 5914	44	0	7
	10	9.313 7976	1000	9.323 2106	1045	0.676 7894	9.990 5870	44	50	
	20	9.313 8976	1000	9.323 3151	1044	0.676 6849	9.990 5826	45	40	
	30	9.313 9976	1000	9.323 4195	1044	0.676 5805	9.990 5781	44	30	
	40	9.314 0976	1000	9.323 5239	1044	0.676 4761	9.990 5737	44	20	
	50	9.314 1976	999	9.323 6283	1044	0.676 3717	9.990 5693	45	10	
54	0	9.314 2975	999	9.323 7327	1043	0.676 2673	9.990 5648	44	0	6
	10	9.314 3974	999	9.323 8370	1043	0.676 1630	9.990 5604	45	50	
	20	9.314 4973	998	9.323 9413	1043	0.676 0587	9.990 5559	44	40	
	30	9.314 5971	998	9.324 0456	1043	0.675 9544	9.990 5515	44	30	
	40	9.314 6969	998	9.324 1499	1042	0.675 8501	9.990 5471	45	20	
	50	9.314 7967	998	9.324 2541	1043	0.675 7459	9.990 5426	44	10	
55	0	9.314 8965	998	9.324 3584	1042	0.675 6416	9.990 5382	45	0	5
	10	9.314 9963	997	9.324 4626	1041	0.675 5374	9.990 5337	44	50	
	20	9.315 0960	997	9.324 5667	1042	0.675 4333	9.990 5293	45	40	
	30	9.315 1957	997	9.324 6709	1041	0.675 3291	9.990 5248	44	30	
	40	9.315 2954	997	9.324 7750	1041	0.675 2250	9.990 5204	45	20	
	50	9.315 3951	996	9.324 8791	1041	0.675 1209	9.990 5159	44	10	
56	0	9.315 4947	996	9.324 9832	1041	0.675 0168	9.990 5115	45	0	4
	10	9.315 5943	996	9.325 0873	1040	0.674 9127	9.990 5070	44	50	
	20	9.315 6939	996	9.325 1913	1040	0.674 8087	9.990 5026	45	40	
	30	9.315 7935	995	9.325 2953	1040	0.674 7047	9.990 4981	44	30	
	40	9.315 8930	996	9.325 3993	1040	0.674 6007	9.990 4937	45	20	
	50	9.315 9926	995	9.325 5033	1040	0.674 4967	9.990 4892	44	10	
57	0	9.316 0921	994	9.325 6073	1039	0.674 3927	9.990 4848	45	0	3
	10	9.316 1915	995	9.325 7112	1039	0.674 2888	9.990 4803	44	50	
	20	9.316 2910	994	9.325 8151	1039	0.674 1849	9.990 4759	45	40	
	30	9.316 3904	994	9.325 9190	1038	0.674 0810	9.990 4714	45	30	
	40	9.316 4898	994	9.326 0228	1039	0.673 9772	9.990 4669	44	20	
	50	9.316 5892	993	9.326 1267	1038	0.673 8733	9.990 4625	45	10	
58	0	9.316 6885	994	9.326 2305	1038	0.673 7695	9.990 4580	44	0	2
	10	9.316 7879	993	9.326 3343	1038	0.673 6657	9.990 4536	45	50	
	20	9.316 8872	992	9.326 4381	1037	0.673 5619	9.990 4491	45	40	
	30	9.316 9864	993	9.326 5418	1037	0.673 4582	9.990 4446	44	30	
	40	9.317 0857	992	9.326 6455	1037	0.673 3545	9.990 4402	45	20	
	50	9.317 1849	992	9.326 7492	1037	0.673 2508	9.990 4357	45	10	
59	0	9.317 2841	992	9.326 8529	1037	0.673 1471	9.990 4312	44	0	1
	10	9.317 3833	992	9.326 9566	1036	0.673 0434	9.990 4268	45	50	
	20	9.317 4825	991	9.327 0602	1036	0.672 9398	9.990 4223	45	40	
	30	9.317 5816	991	9.327 1638	1036	0.672 8362	9.990 4178	45	30	
	40	9.317 6807	991	9.327 2674	1036	0.672 7326	9.990 4133	44	20	
	50	9.317 7798	991	9.327 3710	1035	0.672 6290	9.990 4089	45	10	
60	0	9.317 8789		9.327 4745		0.672 5255	9.990 4044		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	1020
1	102
2	204
3	306
4	408
5	510
6	612
7	714
8	816
9	918

	1010
1	101
2	202
3	303
4	404
5	505
6	606
7	707
8	808
9	909

	1000
1	100
2	200
3	300
4	400
5	500
6	600
7	700
8	800
9	900

	990
1	99
2	198
3	297
4	396
5	495
6	594
7	693
8	792
9	891

	44
1	4.4
2	8.8
3	13.2
4	17.6
5	22.0
6	26.4
7	30.8
8	35.2
9	39.6

	45
1	4.5
2	9.0
3	13.5
4	18.0
5	22.5
6	27.0
7	31.5
8	36.0
9	40.5

78°

1030	
1	103
2	206
3	309
4	412
5	515
6	618
7	721
8	824
9	927

1020	
1	102
2	204
3	306
4	408
5	510
6	612
7	714
8	816
9	918

1010	
1	101
2	202
3	303
4	404
5	505
6	606
7	707
8	808
9	909

1000	
1	100
2	200
3	300
4	400
5	500
6	600
7	700
8	800
9	900

44	
1	4.4
2	8.8
3	13.2
4	17.6
5	22.0
6	26.4
7	30.8
8	35.2
9	39.6

45	
1	4.5
2	9.0
3	13.5
4	18.0
5	22.5
6	27.0
7	31.5
8	36.0
9	40.5

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.317 8789	991	9.327 4745	1035	0.672 5255	9.990 4044	45	0	60
	10	9.317 9780	990	9.327 5780	1035	0.672 4220	9.990 3999	45	50	
	20	9.318 0770	990	9.327 6815	1035	0.672 3185	9.990 3954	44	40	
	30	9.318 1760	989	9.327 7850	1035	0.672 2150	9.990 3910	45	30	
	40	9.318 2749	990	9.327 8885	1034	0.672 1115	9.990 3865	45	20	
	50	9.318 3739	989	9.327 9919	1034	0.672 0081	9.990 3820	45	10	
1	0	9.318 4728	989	9.328 0953	1034	0.671 9047	9.990 3775	45	0	59
	10	9.318 5717	989	9.328 1987	1034	0.671 8013	9.990 3730	44	50	
	20	9.318 6706	989	9.328 3021	1033	0.671 6979	9.990 3686	45	40	
	30	9.318 7695	988	9.328 4054	1033	0.671 5946	9.990 3641	45	30	
	40	9.318 8683	988	9.328 5087	1033	0.671 4913	9.990 3596	45	20	
	50	9.318 9671	988	9.328 6120	1033	0.671 3880	9.990 3551	45	10	
2	0	9.319 0659	988	9.328 7153	1032	0.671 2847	9.990 3506	45	0	58
	10	9.319 1647	987	9.328 8185	1033	0.671 1815	9.990 3461	45	50	
	20	9.319 2634	987	9.328 9218	1032	0.671 0782	9.990 3416	45	40	
	30	9.319 3621	987	9.329 0250	1032	0.670 9750	9.990 3371	44	30	
	40	9.319 4608	987	9.329 1282	1031	0.670 8718	9.990 3327	45	20	
	50	9.319 5595	986	9.329 2313	1032	0.670 7687	9.990 3282	45	10	
3	0	9.319 6581	986	9.329 3345	1031	0.670 6655	9.990 3237	45	0	57
	10	9.319 7567	986	9.329 4376	1031	0.670 5624	9.990 3192	45	50	
	20	9.319 8553	986	9.329 5407	1030	0.670 4593	9.990 3147	45	40	
	30	9.319 9539	986	9.329 6437	1031	0.670 3563	9.990 3102	45	30	
	40	9.320 0525	985	9.329 7468	1030	0.670 2532	9.990 3057	45	20	
	50	9.320 1510	985	9.329 8498	1030	0.670 1502	9.990 3012	45	10	
4	0	9.320 2495	985	9.329 9528	1030	0.670 0472	9.990 2967	45	0	56
	10	9.320 3480	984	9.330 0558	1030	0.669 9442	9.990 2922	45	50	
	20	9.320 4464	985	9.330 1588	1029	0.669 8412	9.990 2877	45	40	
	30	9.320 5449	984	9.330 2617	1029	0.669 7383	9.990 2832	45	30	
	40	9.320 6433	984	9.330 3646	1029	0.669 6354	9.990 2787	45	20	
	50	9.320 7417	983	9.330 4675	1029	0.669 5325	9.990 2742	45	10	
5	0	9.320 8400	984	9.330 5704	1028	0.669 4296	9.990 2697	46	0	55
	10	9.320 9384	983	9.330 6732	1029	0.669 3268	9.990 2651	45	50	
	20	9.321 0367	983	9.330 7761	1028	0.669 2239	9.990 2606	45	40	
	30	9.321 1350	983	9.330 8789	1028	0.669 1211	9.990 2561	45	30	
	40	9.321 2333	982	9.330 9817	1027	0.669 0183	9.990 2516	45	20	
	50	9.321 3315	982	9.331 0844	1028	0.668 9156	9.990 2471	45	10	
6	0	9.321 4297	982	9.331 1872	1027	0.668 8128	9.990 2426	45	0	54
	10	9.321 5279	982	9.331 2899	1027	0.668 7101	9.990 2381	45	50	
	20	9.321 6261	982	9.331 3926	1026	0.668 6074	9.990 2336	46	40	
	30	9.321 7243	981	9.331 4952	1027	0.668 5048	9.990 2290	45	30	
	40	9.321 8224	981	9.331 5979	1026	0.668 4021	9.990 2245	45	20	
	50	9.321 9205	981	9.331 7005	1026	0.668 2995	9.990 2200	45	10	
7	0	9.322 0186	981	9.331 8031	1026	0.668 1969	9.990 2155	45	0	53
	10	9.322 1167	980	9.331 9057	1026	0.668 0943	9.990 2110	46	50	
	20	9.322 2147	980	9.332 0083	1025	0.667 9917	9.990 2064	45	40	
	30	9.322 3127	980	9.332 1108	1025	0.667 8892	9.990 2019	45	30	
	40	9.322 4107	980	9.332 2133	1025	0.667 7867	9.990 1974	45	20	
	50	9.322 5087	979	9.332 3158	1025	0.667 6842	9.990 1929	46	10	
8	0	9.322 6066	980	9.332 4183	1024	0.667 5817	9.990 1883	45	0	52
	10	9.322 7046	979	9.332 5207	1025	0.667 4793	9.990 1838	45	50	
	20	9.322 8025	978	9.332 6232	1024	0.667 3768	9.990 1793	45	40	
	30	9.322 9003	979	9.332 7256	1024	0.667 2744	9.990 1748	46	30	
	40	9.322 9982	978	9.332 8280	1023	0.667 1720	9.990 1702	45	20	
	50	9.323 0960	978	9.332 9303	1024	0.667 0697	9.990 1657	45	10	
9	0	9.323 1938	978	9.333 0327	1023	0.666 9673	9.990 1612	46	0	51
	10	9.323 2916	978	9.333 1350	1023	0.666 8650	9.990 1566	45	50	
	20	9.323 3894	977	9.333 2373	1023	0.666 7627	9.990 1521	45	40	
	30	9.323 4871	977	9.333 3396	1022	0.666 6604	9.990 1476	46	30	
	40	9.323 5848	977	9.333 4418	1022	0.666 5582	9.990 1430	45	20	
	50	9.323 6825	977	9.333 5440	1023	0.666 4560	9.990 1385	46	10	
10	0	9.323 7802		9.333 6463		0.666 3537	9.990 1339		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d	″	′

77°

12°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.323 7802	976	9.333 6463	1021	0.666 3537	9.990 1339	45	0	50
	10	9.323 8778	977	9.333 7484	1022	0.666 2516	9.990 1294	45	50	
	20	9.323 9755	976	9.333 8506	1022	0.666 1494	9.990 1249	46	40	
	30	9.324 0731	976	9.333 9528	1021	0.666 0472	9.990 1203	45	30	
	40	9.324 1707	975	9.334 0549	1021	0.665 9451	9.990 1158	46	20	
	50	9.324 2682	975	9.334 1570	1021	0.665 8430	9.990 1112	45	10	
11	0	9.324 3657	976	9.334 2591	1020	0.665 7409	9.990 1067	46	0	49
	10	9.324 4633	974	9.334 3611	1020	0.665 6389	9.990 1021	45	50	
	20	9.324 5607	975	9.334 4631	1021	0.665 5369	9.990 0976	46	40	
	30	9.324 6582	974	9.334 5652	1019	0.665 4348	9.990 0930	45	30	
	40	9.324 7556	975	9.334 6671	1020	0.665 3329	9.990 0885	46	20	
	50	9.324 8531	974	9.334 7691	1020	0.665 2309	9.990 0839	45	10	
12	0	9.324 9505	973	9.334 8711	1019	0.665 1289	9.990 0794	46	0	48
	10	9.325 0478	974	9.334 9730	1019	0.665 0270	9.990 0748	45	50	
	20	9.325 1452	973	9.335 0749	1019	0.664 9251	9.990 0703	46	40	
	30	9.325 2425	973	9.335 1768	1018	0.664 8232	9.990 0657	45	30	
	40	9.325 3398	973	9.335 2786	1019	0.664 7214	9.990 0612	46	20	
	50	9.325 4371	973	9.335 3805	1018	0.664 6195	9.990 0566	45	10	
13	0	9.325 5344	972	9.335 4823	1018	0.664 5177	9.990 0521	46	0	47
	10	9.325 6316	972	9.335 5841	1018	0.664 4159	9.990 0475	46	50	
	20	9.325 7288	972	9.335 6859	1017	0.664 3141	9.990 0429	45	40	
	30	9.325 8260	972	9.335 7876	1017	0.664 2124	9.990 0384	46	30	
	40	9.325 9132	971	9.335 8893	1017	0.664 1107	9.990 0338	45	20	
	50	9.326 0203	971	9.335 9910	1017	0.664 0090	9.990 0293	46	10	
14	0	9.326 1174	971	9.336 0927	1017	0.663 9073	9.990 0247	46	0	46
	10	9.326 2145	971	9.336 1944	1016	0.663 8056	9.990 0201	45	50	
	20	9.326 3116	971	9.336 2960	1017	0.663 7040	9.990 0156	46	40	
	30	9.326 4087	970	9.336 3977	1016	0.663 6023	9.990 0110	46	30	
	40	9.326 5057	970	9.336 4993	1015	0.663 5007	9.990 0064	45	20	
	50	9.326 6027	970	9.336 6008	1016	0.663 3992	9.990 0019	46	10	
15	0	9.326 6997	969	9.336 7024	1015	0.663 2976	9.989 9973	46	0	45
	10	9.326 7966	970	9.336 8039	1015	0.663 1961	9.989 9927	46	50	
	20	9.326 8936	969	9.336 9054	1015	0.663 0946	9.989 9881	45	40	
	30	9.326 9905	969	9.337 0069	1015	0.662 9931	9.989 9836	46	30	
	40	9.327 0874	969	9.337 1084	1015	0.662 8916	9.989 9790	46	20	
	50	9.327 1843	968	9.337 2099	1014	0.662 7901	9.989 9744	46	10	
16	0	9.327 2811	968	9.337 3113	1014	0.662 6887	9.989 9698	45	0	44
	10	9.327 3779	969	9.337 4127	1014	0.662 5873	9.989 9653	46	50	
	20	9.327 4748	967	9.337 5141	1013	0.662 4859	9.989 9607	46	40	
	30	9.327 5715	968	9.337 6154	1014	0.662 3846	9.989 9561	46	30	
	40	9.327 6683	967	9.337 7168	1013	0.662 2832	9.989 9515	46	20	
	50	9.327 7650	967	9.337 8181	1013	0.662 1819	9.989 9469	46	10	
17	0	9.327 8617	967	9.337 9194	1013	0.662 0806	9.989 9423	45	0	43
	10	9.327 9584	967	9.338 0207	1012	0.661 9793	9.989 9378	46	50	
	20	9.328 0551	967	9.338 1219	1013	0.661 8781	9.989 9332	46	40	
	30	9.328 1518	966	9.338 2232	1012	0.661 7768	9.989 9286	46	30	
	40	9.328 2484	966	9.338 3244	1012	0.661 6756	9.989 9240	46	20	
	50	9.328 3450	966	9.338 4256	1011	0.661 5744	9.989 9194	46	10	
18	0	9.328 4416	965	9.338 5267	1012	0.661 4733	9.989 9148	46	0	42
	10	9.328 5381	965	9.338 6279	1011	0.661 3721	9.989 9102	46	50	
	20	9.328 6346	966	9.338 7290	1011	0.661 2710	9.989 9056	46	40	
	30	9.328 7312	964	9.338 8301	1011	0.661 1699	9.989 9010	45	30	
	40	9.328 8276	965	9.338 9312	1011	0.661 0688	9.989 8965	46	20	
	50	9.328 9241	965	9.339 0323	1010	0.660 9677	9.989 8919	46	10	
19	0	9.329 0206	964	9.339 1333	1010	0.660 8667	9.989 8873	46	0	41
	10	9.329 1170	964	9.339 2343	1010	0.660 7657	9.989 8827	46	50	
	20	9.329 2134	964	9.339 3353	1010	0.660 6647	9.989 8781	46	40	
	30	9.329 3098	963	9.339 4363	1009	0.660 5637	9.989 8735	46	30	
	40	9.329 4061	963	9.339 5372	1010	0.660 4628	9.989 8689	46	20	
	50	9.329 5024	964	9.339 6382	1009	0.660 3618	9.989 8643	46	10	
20	0	9.329 5988		9.339 7391		0.660 2609	9.989 8597		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

77°

990	
1	99
2	198
3	297
4	396
5	495
6	594
7	693
8	792
9	891

980	
1	98
2	196
3	294
4	392
5	490
6	588
7	686
8	784
9	882

970	
1	97
2	194
3	291
4	388
5	485
6	582
7	679
8	776
9	873

960	
1	96
2	192
3	288
4	384
5	480
6	576
7	672
8	768
9	864

45	
1	4.5
2	9.0
3	13.5
4	18.0
5	22.5
6	27.0
7	31.5
8	36.0
9	40.5

46	
1	4.6
2	9.2
3	13.8
4	18.4
5	23.0
6	27.6
7	32.2
8	36.8
9	41.4

12°

1010	
1	101
2	202
3	303
4	404
5	505
6	606
7	707
8	808
9	909

1000	
1	100
2	200
3	300
4	400
5	500
6	600
7	700
8	800
9	900

990	
1	99
2	198
3	297
4	396
5	495
6	594
7	693
8	792
9	891

980	
1	98
2	196
3	294
4	392
5	490
6	588
7	686
8	784
9	882

46	
1	4·6
2	9·2
3	13·8
4	18·4
5	23·0
6	27·6
7	32·2
8	36·8
9	41·4

47	
1	4·7
2	9·4
3	14·1
4	18·8
5	23·5
6	28·2
7	32·9
8	37·6
9	42·3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9·329 5988	962	9·339 7391	1009	0.660 2609	9·989 8597	46	0	40
	10	9·329 6950	963	9·339 8400	1009	0.660 1600	9·989 8551	47	50	
	20	9·329 7913	962	9·339 9409	1008	0.660 0591	9·989 8504	46	40	
	30	9·329 8875	963	9·340 0417	1008	0.659 9583	9·989 8458	46	30	
	40	9·329 9838	962	9·340 1425	1008	0.659 8575	9·989 8412	46	20	
	50	9·330 0800	961	9·340 2433	1008	0.659 7567	9·989 8366	46	10	
21	0	9·330 1761	962	9·340 3441	1008	0.659 6559	9·989 8320	46	0	39
	10	9·330 2723	961	9·340 4449	1007	0.659 5551	9·989 8274	46	50	
	20	9·330 3684	961	9·340 5456	1008	0.659 4544	9·989 8228	46	40	
	30	9·330 4645	961	9·340 6464	1007	0.659 3536	9·989 8182	46	30	
	40	9·330 5606	961	9·340 7471	1006	0.659 2529	9·989 8136	46	20	
	50	9·330 6567	960	9·340 8477	1007	0.659 1523	9·989 8090	47	10	
22	0	9·330 7527	960	9·340 9484	1006	0.659 0516	9·989 8043	46	0	38
	10	9·330 8487	960	9·341 0490	1006	0.658 9510	9·989 7997	46	50	
	20	9·330 9447	960	9·341 1496	1006	0.658 8504	9·989 7951	46	40	
	30	9·331 0407	960	9·341 2502	1006	0.658 7498	9·989 7905	46	30	
	40	9·331 1367	959	9·341 3508	1006	0.658 6492	9·989 7859	47	20	
	50	9·331 2326	959	9·341 4514	1005	0.658 5486	9·989 7812	46	10	
23	0	9·331 3285	959	9·341 5519	1005	0.658 4481	9·989 7766	46	0	37
	10	9·331 4244	959	9·341 6524	1005	0.658 3476	9·989 7720	46	50	
	20	9·331 5203	958	9·341 7529	1005	0.658 2471	9·989 7674	47	40	
	30	9·331 6161	958	9·341 8534	1004	0.658 1466	9·989 7627	46	30	
	40	9·331 7119	958	9·341 9538	1004	0.658 0462	9·989 7581	46	20	
	50	9·331 8077	958	9·342 0542	1004	0.657 9458	9·989 7535	46	10	
24	0	9·331 9035	958	9·342 1546	1004	0.657 8454	9·989 7489	47	0	36
	10	9·331 9993	957	9·342 2550	1004	0.657 7450	9·989 7442	46	50	
	20	9·332 0950	957	9·342 3554	1003	0.657 6446	9·989 7396	46	40	
	30	9·332 1907	957	9·342 4557	1003	0.657 5443	9·989 7350	47	30	
	40	9·332 2864	956	9·342 5560	1003	0.657 4440	9·989 7303	46	20	
	50	9·332 3820	957	9·342 6563	1003	0.657 3437	9·989 7257	46	10	
25	0	9·332 4777	956	9·342 7566	1003	0.657 2434	9·989 7211	47	0	35
	10	9·332 5733	956	9·342 8569	1002	0.657 1431	9·989 7164	46	50	
	20	9·332 6689	956	9·342 9571	1002	0.657 0429	9·989 7118	46	40	
	30	9·332 7645	955	9·343 0573	1002	0.656 9427	9·989 7072	47	30	
	40	9·332 8600	956	9·343 1575	1002	0.656 8425	9·989 7025	46	20	
	50	9·332 9556	955	9·343 2577	1001	0.656 7423	9·989 6979	47	10	
26	0	9·333 0511	955	9·343 3578	1002	0.656 6422	9·989 6932	46	0	34
	10	9·333 1466	954	9·343 4580	1001	0.656 5420	9·989 6886	47	50	
	20	9·333 2420	955	9·343 5581	1001	0.656 4419	9·989 6839	46	40	
	30	9·333 3375	954	9·343 6582	1000	0.656 3418	9·989 6793	46	30	
	40	9·333 4329	954	9·343 7582	1001	0.656 2418	9·989 6747	47	20	
	50	9·333 5283	954	9·343 8583	1000	0.656 1417	9·989 6700	46	10	
27	0	9·333 6237	953	9·343 9583	1000	0.656 0417	9·989 6654	47	0	33
	10	9·333 7190	954	9·344 0583	1000	0.655 9417	9·989 6607	46	50	
	20	9·333 8144	953	9·344 1583	1000	0.655 8417	9·989 6561	47	40	
	30	9·333 9097	953	9·344 2583	999	0.655 7417	9·989 6514	46	30	
	40	9·334 0050	952	9·344 3582	999	0.655 6418	9·989 6468	47	20	
	50	9·334 1002	953	9·344 4581	999	0.655 5419	9·989 6421	47	10	
28	0	9·334 1955	952	9·344 5580	999	0.655 4420	9·989 6374	46	0	32
	10	9·334 2907	952	9·344 6579	999	0.655 3421	9·989 6328	47	50	
	20	9·334 3859	952	9·344 7578	998	0.655 2422	9·989 6281	46	40	
	30	9·334 4811	952	9·344 8576	998	0.655 1424	9·989 6235	47	30	
	40	9·334 5763	951	9·344 9574	998	0.655 0426	9·989 6188	46	20	
	50	9·334 6714	951	9·345 0572	998	0.654 9428	9·989 6142	47	10	
29	0	9·334 7665	951	9·345 1570	998	0.654 8430	9·989 6095	47	0	31
	10	9·334 8616	951	9·345 2568	997	0.654 7432	9·989 6048	46	50	
	20	9·334 9567	950	9·345 3565	997	0.654 6435	9·989 6002	47	40	
	30	9·335 0517	951	9·345 4562	997	0.654 5438	9·989 5955	47	30	
	40	9·335 1468	950	9·345 5559	997	0.654 4441	9·989 5908	46	20	
	50	9·335 2418	950	9·345 6556	996	0.654 3444	9·989 5862	47	10	
30	0	9·335 3368		9·345 7552		0.654 2448	9·989 5815		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

12°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.335 3368	949	9.345 7552	997	0.654 2448	9.989 5815	47	0	30
	10	9.335 4317	950	9.345 8549	996	0.654 1451	9.989 5768	46	50	
	20	9.335 5267	949	9.345 9545	996	0.654 0455	9.989 5722	47	40	
	30	9.335 6216	949	9.346 0541	995	0.653 9459	9.989 5675	47	30	
	40	9.335 7165	948	9.346 1536	996	0.653 8464	9.989 5628	46	20	
	50	9.335 8113	949	9.346 2532	995	0.653 7468	9.989 5582	47	10	
31	0	9.335 9062	948	9.346 3527	995	0.653 6473	9.989 5535	47	0	29
	10	9.336 0010	948	9.346 4522	995	0.653 5478	9.989 5488	47	50	
	20	9.336 0958	948	9.346 5517	995	0.653 4483	9.989 5441	46	40	
	30	9.336 1906	948	9.346 6512	994	0.653 3488	9.989 5395	47	30	
	40	9.336 2854	947	9.346 7506	994	0.653 2494	9.989 5348	47	20	
	50	9.336 3801	948	9.346 8500	994	0.653 1500	9.989 5301	47	10	
32	0	9.336 4749	947	9.346 9494	994	0.653 0506	9.989 5254	47	0	28
	10	9.336 5696	947	9.347 0488	994	0.652 9512	9.989 5207	46	50	
	20	9.336 6643	946	9.347 1482	993	0.652 8518	9.989 5161	47	40	
	30	9.336 7589	946	9.347 2475	994	0.652 7525	9.989 5114	47	30	
	40	9.336 8535	947	9.347 3469	993	0.652 6531	9.989 5067	47	20	
	50	9.336 9482	946	9.347 4462	992	0.652 5538	9.989 5020	47	10	
33	0	9.337 0428	945	9.347 5454	993	0.652 4546	9.989 4973	47	0	27
	10	9.337 1373	946	9.347 6447	992	0.652 3553	9.989 4926	47	50	
	20	9.337 2319	945	9.347 7439	993	0.652 2561	9.989 4879	46	40	
	30	9.337 3264	945	9.347 8432	992	0.652 1568	9.989 4833	47	30	
	40	9.337 4209	945	9.347 9424	991	0.652 0576	9.989 4786	47	20	
	50	9.337 5154	945	9.348 0415	992	0.651 9585	9.989 4739	47	10	
34	0	9.337 6099	944	9.348 1407	991	0.651 8593	9.989 4692	47	0	26
	10	9.337 7043	944	9.348 2398	991	0.651 7602	9.989 4645	47	50	
	20	9.337 7987	944	9.348 3389	991	0.651 6611	9.989 4598	47	40	
	30	9.337 8931	944	9.348 4380	991	0.651 5620	9.989 4551	47	30	
	40	9.337 9875	944	9.348 5371	991	0.651 4629	9.989 4504	47	20	
	50	9.338 0819	943	9.348 6362	990	0.651 3638	9.989 4457	47	10	
35	0	9.338 1762	943	9.348 7352	990	0.651 2648	9.989 4410	47	0	25
	10	9.338 2705	943	9.348 8342	990	0.651 1658	9.989 4363	47	50	
	20	9.338 3648	943	9.348 9332	990	0.651 0668	9.989 4316	47	40	
	30	9.338 4591	942	9.349 0322	989	0.650 9678	9.989 4269	47	30	
	40	9.338 5533	943	9.349 1311	990	0.650 8689	9.989 4222	47	20	
	50	9.338 6476	942	9.349 2301	989	0.650 7699	9.989 4175	47	10	
36	0	9.338 7418	941	9.349 3290	989	0.650 6710	9.989 4128	47	0	24
	10	9.338 8359	942	9.349 4279	988	0.650 5721	9.989 4081	47	50	
	20	9.338 9301	942	9.349 5267	989	0.650 4733	9.989 4034	47	40	
	30	9.339 0243	941	9.349 6256	988	0.650 3744	9.989 3987	48	30	
	40	9.339 1184	941	9.349 7244	988	0.650 2756	9.989 3939	47	20	
	50	9.339 2125	940	9.349 8232	988	0.650 1768	9.989 3892	47	10	
37	0	9.339 3065	941	9.349 9220	988	0.650 0780	9.989 3845	47	0	23
	10	9.339 4006	940	9.350 0208	987	0.649 9792	9.989 3798	47	50	
	20	9.339 4946	941	9.350 1195	988	0.649 8805	9.989 3751	47	40	
	30	9.339 5887	939	9.350 2183	987	0.649 7817	9.989 3704	47	30	
	40	9.339 6826	940	9.350 3170	987	0.649 6830	9.989 3657	48	20	
	50	9.339 7766	940	9.350 4157	986	0.649 5843	9.989 3609	47	10	
38	0	9.339 8706	939	9.350 5143	987	0.649 4857	9.989 3562	47	0	22
	10	9.339 9645	939	9.350 6130	986	0.649 3870	9.989 3515	47	50	
	20	9.340 0584	939	9.350 7116	986	0.649 2884	9.989 3468	47	40	
	30	9.340 1523	939	9.350 8102	986	0.649 1898	9.989 3421	48	30	
	40	9.340 2462	938	9.350 9088	986	0.649 0912	9.989 3373	47	20	
	50	9.340 3400	938	9.351 0074	985	0.648 9926	9.989 3326	47	10	
39	0	9.340 4338	938	9.351 1059	986	0.648 8941	9.989 3279	47	0	21
	10	9.340 5276	938	9.351 2045	985	0.648 7955	9.989 3232	48	50	
	20	9.340 6214	938	9.351 3030	984	0.648 6970	9.989 3184	47	40	
	30	9.340 7152	937	9.351 4014	985	0.648 5986	9.989 3137	47	30	
	40	9.340 8089	937	9.351 4999	985	0.648 5001	9.989 3090	48	20	
	50	9.340 9026	937	9.351 5984	984	0.648 4016	9.989 3042	47	10	
40	0	9.340 9963		9.351 6968		0.648 3032	9.989 2995		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

970	
1	97
2	194
3	291
4	388
5	485
6	582
7	679
8	776
9	873

960	
1	96
2	192
3	288
4	384
5	480
6	576
7	672
8	768
9	864

950	
1	95
2	190
3	285
4	380
5	475
6	570
7	665
8	760
9	855

940	
1	94
2	188
3	282
4	376
5	470
6	564
7	658
8	752
9	846

47	
1	4.7
2	9.4
3	14.1
4	18.8
5	23.5
6	28.2
7	32.9
8	37.6
9	42.3

48	
1	4.8
2	9.6
3	14.4
4	19.2
5	24.0
6	28.8
7	33.6
8	38.4
9	43.2

77°

980	
1	98.0
2	196.0
3	294.0
4	392.0
5	490.0
6	588.0
7	686.0
8	784.0
9	882.0

975	
1	97.5
2	195.0
3	292.5
4	390.0
5	487.5
6	585.0
7	682.5
8	780.0
9	877.5

935	
1	93.5
2	187.0
3	280.5
4	374.0
5	467.5
6	561.0
7	654.5
8	748.0
9	841.5

930	
1	93.0
2	186.0
3	279.0
4	372.0
5	465.0
6	558.0
7	651.0
8	744.0
9	837.0

925	
1	92.5
2	185.0
3	277.5
4	370.0
5	462.5
6	555.0
7	647.5
8	740.0
9	832.5

48	
1	4.8
2	9.6
3	14.4
4	19.2
5	24.0
6	28.8
7	33.6
8	38.4
9	43.2

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.340 9963	937	9.351 6968	984	0.648 3032	9.989 2995	47	0	20
	10	9.341 0900	936	9.351 7952	984	0.648 2048	9.989 2948	48	50	
	20	9.341 1836	937	9.351 8936	983	0.648 1064	9.989 2900	47	40	
	30	9.341 2773	936	9.351 9919	984	0.648 0081	9.989 2853	47	30	
	40	9.341 3709	935	9.352 0903	983	0.647 9097	9.989 2806	48	20	
	50	9.341 4644	936	9.352 1886	983	0.647 8114	9.989 2758	47	10	
41	0	9.341 5580	936	9.352 2869	983	0.647 7131	9.989 2711	47	0	19
	10	9.341 6516	935	9.352 3852	983	0.647 6148	9.989 2664	48	50	
	20	9.341 7451	935	9.352 4835	982	0.647 5165	9.989 2616	47	40	
	30	9.341 8386	935	9.352 5817	982	0.647 4183	9.989 2569	48	30	
	40	9.341 9321	934	9.352 6799	982	0.647 3201	9.989 2521	47	20	
	50	9.342 0255	935	9.352 7781	982	0.647 2219	9.989 2474	47	10	
42	0	9.342 1190	934	9.352 8763	982	0.647 1237	9.989 2427	48	0	18
	10	9.342 2124	934	9.352 9745	981	0.647 0255	9.989 2379	47	50	
	20	9.342 3058	934	9.353 0726	982	0.646 9274	9.989 2332	48	40	
	30	9.342 3992	933	9.353 1708	981	0.646 8292	9.989 2284	47	30	
	40	9.342 4925	934	9.353 2689	980	0.646 7311	9.989 2237	48	20	
	50	9.342 5859	933	9.353 3669	981	0.646 6331	9.989 2189	47	10	
43	0	9.342 6792	933	9.353 4650	980	0.646 5350	9.989 2142	48	0	17
	10	9.342 7725	932	9.353 5630	981	0.646 4370	9.989 2094	47	50	
	20	9.342 8657	933	9.353 6611	980	0.646 3389	9.989 2047	48	40	
	30	9.342 9590	932	9.353 7591	980	0.646 2409	9.989 1999	48	30	
	40	9.343 0522	932	9.353 8571	979	0.646 1429	9.989 1951	47	20	
	50	9.343 1454	932	9.353 9550	980	0.646 0450	9.989 1904	48	10	
44	0	9.343 2386	932	9.354 0530	979	0.645 9470	9.989 1856	47	0	16
	10	9.343 3318	931	9.354 1509	979	0.645 8491	9.989 1809	48	50	
	20	9.343 4249	931	9.354 2488	979	0.645 7512	9.989 1761	47	40	
	30	9.343 5180	931	9.354 3467	978	0.645 6533	9.989 1714	48	30	
	40	9.343 6111	931	9.354 4445	979	0.645 5555	9.989 1666	48	20	
	50	9.343 7042	931	9.354 5424	978	0.645 4576	9.989 1618	47	10	
45	0	9.343 7973	930	9.354 6402	978	0.645 3598	9.989 1571	48	0	15
	10	9.343 8903	930	9.354 7380	978	0.645 2620	9.989 1523	48	50	
	20	9.343 9833	930	9.354 8358	978	0.645 1642	9.989 1475	47	40	
	30	9.344 0763	930	9.354 9336	977	0.645 0664	9.989 1428	48	30	
	40	9.344 1693	930	9.355 0313	977	0.644 9687	9.989 1380	48	20	
	50	9.344 2623	929	9.355 1290	977	0.644 8710	9.989 1332	47	10	
46	0	9.344 3552	929	9.355 2267	977	0.644 7733	9.989 1285	48	0	14
	10	9.344 4481	929	9.355 3244	977	0.644 6756	9.989 1237	48	50	
	20	9.344 5410	929	9.355 4221	976	0.644 5779	9.989 1189	48	40	
	30	9.344 6339	928	9.355 5197	977	0.644 4803	9.989 1141	47	30	
	40	9.344 7267	929	9.355 6174	976	0.644 3826	9.989 1094	48	20	
	50	9.344 8196	928	9.355 7150	976	0.644 2850	9.989 1046	48	10	
47	0	9.344 9124	928	9.355 8126	975	0.644 1874	9.989 0998	48	0	13
	10	9.345 0052	927	9.355 9101	976	0.644 0899	9.989 0950	47	50	
	20	9.345 0979	928	9.356 0077	975	0.643 9923	9.989 0903	48	40	
	30	9.345 1907	927	9.356 1052	975	0.643 8948	9.989 0855	48	30	
	40	9.345 2834	927	9.356 2027	975	0.643 7973	9.989 0807	48	20	
	50	9.345 3761	927	9.356 3002	975	0.643 6998	9.989 0759	48	10	
48	0	9.345 4688	927	9.356 3977	974	0.643 6023	9.989 0711	47	0	12
	10	9.345 5615	926	9.356 4951	974	0.643 5049	9.989 0664	48	50	
	20	9.345 6541	926	9.356 5925	975	0.643 4075	9.989 0616	48	40	
	30	9.345 7467	926	9.356 6900	973	0.643 3100	9.989 0568	48	30	
	40	9.345 8393	926	9.356 7873	974	0.643 2127	9.989 0520	48	20	
	50	9.345 9319	926	9.356 8847	974	0.643 1153	9.989 0472	48	10	
49	0	9.346 0245	925	9.356 9821	973	0.643 0179	9.989 0424	48	0	11
	10	9.346 1170	925	9.357 0794	973	0.642 9206	9.989 0376	48	50	
	20	9.346 2095	925	9.357 1767	973	0.642 8233	9.989 0328	48	40	
	30	9.346 3020	925	9.357 2740	973	0.642 7260	9.989 0280	48	30	
	40	9.346 3945	925	9.357 3713	972	0.642 6287	9.989 0232	47	20	
	50	9.346 4870	924	9.357 4685	973	0.642 5315	9.989 0185	48	10	
50	0	9.346 5794		9.357 5658		0.642 4342	9.989 0137		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.346 5794	924	9.357 5658	972	0.642 4342	9.989 0137	48	0	10
	10	9.346 6718	924	9.357 6630	972	0.642 3370	9.989 0089	48	50	
	20	9.346 7642	924	9.357 7602	971	0.642 2398	9.989 0041	48	40	
	30	9.346 8566	923	9.357 8573	972	0.642 1427	9.988 9993	48	30	
	40	9.346 9489	924	9.357 9545	971	0.642 0455	9.988 9945	48	20	
	50	9.347 0413	923	9.358 0516	971	0.641 9484	9.988 9897	48	10	
51	0	9.347 1336	923	9.358 1487	971	0.641 8513	9.988 9849	48	0	9
	10	9.347 2259	923	9.358 2458	971	0.641 7542	9.988 9801	48	50	
	20	9.347 3182	922	9.358 3429	971	0.641 6571	9.988 9753	49	40	
	30	9.347 4104	922	9.358 4400	970	0.641 5600	9.988 9704	48	30	
	40	9.347 5026	922	9.358 5370	970	0.641 4630	9.988 9656	48	20	
	50	9.347 5948	922	9.358 6340	970	0.641 3660	9.988 9608	48	10	
52	0	9.347 6870	922	9.358 7310	970	0.641 2690	9.988 9560	48	0	8
	10	9.347 7792	921	9.358 8280	969	0.641 1720	9.988 9512	48	50	
	20	9.347 8713	922	9.358 9249	970	0.641 0751	9.988 9464	48	40	
	30	9.347 9635	921	9.359 0219	969	0.640 9781	9.988 9416	48	30	
	40	9.348 0556	921	9.359 1188	969	0.640 8812	9.988 9368	48	20	
	50	9.348 1477	920	9.359 2157	969	0.640 7843	9.988 9320	49	10	
53	0	9.348 2397	921	9.359 3126	968	0.640 6874	9.988 9271	48	0	7
	10	9.348 3318	920	9.359 4094	969	0.640 5906	9.988 9223	48	50	
	20	9.348 4238	920	9.359 5063	968	0.640 4937	9.988 9175	48	40	
	30	9.348 5158	920	9.359 6031	968	0.640 3969	9.988 9127	48	30	
	40	9.348 6078	920	9.359 6999	968	0.640 3001	9.988 9079	48	20	
	50	9.348 6998	919	9.359 7967	968	0.640 2033	9.988 9031	49	10	
54	0	9.348 7917	919	9.359 8935	967	0.640 1065	9.988 8982	48	0	6
	10	9.348 8836	919	9.359 9902	967	0.640 0098	9.988 8934	48	50	
	20	9.348 9755	919	9.360 0869	967	0.639 9131	9.988 8886	48	40	
	30	9.349 0674	919	9.360 1836	967	0.639 8164	9.988 8838	49	30	
	40	9.349 1593	918	9.360 2803	967	0.639 7197	9.988 8789	48	20	
	50	9.349 2511	918	9.360 3770	966	0.639 6230	9.988 8741	48	10	
55	0	9.349 3429	918	9.360 4736	967	0.639 5264	9.988 8693	49	0	5
	10	9.349 4347	918	9.360 5703	966	c.639 4297	9.988 8644	48	50	
	20	9.349 5265	918	9.360 6669	966	0.639 3331	9.988 8596	48	40	
	30	9.349 6183	917	9.360 7635	965	0.639 2365	9.988 8548	48	30	
	40	9.349 7100	917	9.360 8600	966	0.639 1400	9.988 8500	49	20	
	50	9.349 8017	917	9.360 9566	965	0.639 0434	9.988 8451	48	10	
56	0	9.349 8934	917	9.361 0531	965	0.638 9469	9.988 8403	48	0	4
	10	9.349 9851	916	9.361 1496	965	0.638 8504	9.988 8355	49	50	
	20	9.350 0767	917	9.361 2461	965	0.638 7539	9.988 8306	48	40	
	30	9.350 1684	916	9.361 3426	964	0.638 6574	9.988 8258	49	30	
	40	9.350 2600	916	9.361 4390	965	0.638 5610	9.988 8209	48	20	
	50	9.350 3516	916	9.361 5355	964	0.638 4645	9.988 8161	48	10	
57	0	9.350 4432	915	9.361 6319	964	0.638 3681	9.988 8113	49	0	3
	10	9.350 5347	915	9.361 7283	964	0.638 2717	9.988 8064	48	50	
	20	9.350 6262	916	9.361 8247	963	0.638 1753	9.988 8016	49	40	
	30	9.350 7178	915	9.361 9210	964	0.638 0790	9.988 7967	48	30	
	40	9.350 8093	914	9.362 0174	963	0.637 9826	9.988 7919	49	20	
	50	9.350 9007	915	9.362 1137	963	0.637 8863	9.988 7870	48	10	
58	0	9.350 9922	914	9.362 2100	963	0.637 7900	9.988 7822	49	0	2
	10	9.351 0836	914	9.362 3063	962	0.637 6937	9.988 7773	48	50	
	20	9.351 1750	914	9.362 4025	963	0.637 5975	9.988 7725	49	40	
	30	9.351 2664	914	9.362 4988	962	0.637 5012	9.988 7676	48	30	
	40	9.351 3578	913	9.362 5950	962	0.637 4050	9.988 7628	49	20	
	50	9.351 4491	914	9.362 6912	962	0.637 3088	9.988 7579	48	10	
59	0	9.351 5405	913	9.362 7874	962	0.637 2126	9.988 7531	49	0	1
	10	9.351 6318	913	9.362 8836	961	0.637 1164	9.988 7482	48	50	
	20	9.351 7231	912	9.362 9797	961	0.637 0203	9.988 7434	49	40	
	30	9.351 8143	913	9.363 0758	961	0.636 9242	9.988 7385	48	30	
	40	9.351 9056	912	9.363 1719	961	0.636 8281	9.988 7337	49	20	
	50	9.351 9968	912	9.363 2680	961	0.636 7320	9.988 7288	49	10	
60	0	9.352 0880		9.363 3641		0.636 6359	9.988 7239		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	

	970
1	97.0
2	194.0
3	291.0
4	388.0
5	485.0
6	582.0
7	679.0
8	776.0
9	873.0

	965
1	96.5
2	193.0
3	289.5
4	386.0
5	482.5
6	579.0
7	675.5
8	772.0
9	868.5

	960
1	96.0
2	192.0
3	288.0
4	384.0
5	480.0
6	576.0
7	672.0
8	768.0
9	864.0

	920
1	92.0
2	184.0
3	276.0
4	368.0
5	460.0
6	552.0
7	644.0
8	736.0
9	828.0

	915
1	91.5
2	183.0
3	274.5
4	366.0
5	457.5
6	549.0
7	640.5
8	732.0
9	823.5

	49
1	4.9
2	9.8
3	14.7
4	19.6
5	24.5
6	29.4
7	34.3
8	39.2
9	44.1

13°

	960
1	96.0
2	192.0
3	288.0
4	384.0
5	480.0
6	576.0
7	672.0
8	768.0
9	864.0

	955
1	95.5
2	191.0
3	286.5
4	382.0
5	477.5
6	573.0
7	668.5
8	764.0
9	859.5

	950
1	95.0
2	190.0
3	285.0
4	380.0
5	475.0
6	570.0
7	665.0
8	760.0
9	855.0

	910
1	91.0
2	182.0
3	273.0
4	364.0
5	455.0
6	546.0
7	637.0
8	728.0
9	819.0

	905
1	90.5
2	181.0
3	271.5
4	362.0
5	452.5
6	543.0
7	633.5
8	724.0
9	814.5

	49
1	4.9
2	9.8
3	14.7
4	19.6
5	24.5
6	29.4
7	34.3
8	39.2
9	44.1

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.352 0880	912	9.363 3641	961	0.636 6359	9.988 7239	48	0	60
	10	9.352 1792	912	9.363 4602	960	0.636 5398	9.988 7191	49	50	
	20	9.352 2704	911	9.363 5562	960	0.636 4438	9.988 7142	49	40	
	30	9.352 3615	912	9.363 6522	960	0.636 3478	9.988 7093	48	30	
	40	9.352 4527	911	9.363 7482	960	0.636 2518	9.988 7045	49	20	
	50	9.352 5438	911	9.363 8442	959	0.636 1558	9.988 6996	49	10	
1	0	9.352 6349	910	9.363 9401	960	0.636 0599	9.988 6947	48	0	59
	10	9.352 7259	911	9.364 0361	959	0.635 9639	9.988 6899	49	50	
	20	9.352 8170	910	9.364 1320	959	0.635 8680	9.988 6850	49	40	
	30	9.352 9080	910	9.364 2279	959	0.635 7721	9.988 6801	48	30	
	40	9.352 9990	910	9.364 3238	958	0.635 6762	9.988 6753	49	20	
	50	9.353 0900	910	9.364 4196	959	0.635 5804	9.988 6704	49	10	
2	0	9.353 1810	909	9.364 5155	958	0.635 4845	9.988 6655	49	0	58
	10	9.353 2719	910	9.364 6113	958	0.635 3887	9.988 6606	48	50	
	20	9.353 3629	909	9.364 7071	958	0.635 2929	9.988 6558	49	40	
	30	9.353 4538	909	9.364 8029	957	0.635 1971	9.988 6509	49	30	
	40	9.353 5447	908	9.364 8986	958	0.635 1014	9.988 6460	49	20	
	50	9.353 6355	909	9.364 9944	957	0.635 0056	9.988 6411	48	10	
3	0	9.353 7264	908	9.365 0901	957	0.634 9099	9.988 6363	49	0	57
	10	9.353 8172	908	9.365 1858	957	0.634 8142	9.988 6314	49	50	
	20	9.353 9080	908	9.365 2815	957	0.634 7185	9.988 6265	49	40	
	30	9.353 9988	908	9.365 3772	956	0.634 6228	9.988 6216	49	30	
	40	9.354 0896	907	9.365 4728	957	0.634 5272	9.988 6167	49	20	
	50	9.354 1803	907	9.365 5685	956	0.634 4315	9.988 6118	48	10	
4	0	9.354 2710	908	9.365 6641	956	0.634 3359	9.988 6070	49	0	56
	10	9.354 3618	906	9.365 7597	956	0.634 2403	9.988 6021	49	50	
	20	9.354 4524	907	9.365 8553	955	0.634 1447	9.988 5972	49	40	
	30	9.354 5431	907	9.365 9508	956	0.634 0492	9.988 5923	49	30	
	40	9.354 6338	906	9.366 0464	955	0.633 9536	9.988 5874	49	20	
	50	9.354 7244	906	9.366 1419	955	0.633 8581	9.988 5825	49	10	
5	0	9.354 8150	906	9.366 2374	955	0.633 7626	9.988 5776	49	0	55
	10	9.354 9056	906	9.366 3329	954	0.633 6671	9.988 5727	49	50	
	20	9.354 9962	905	9.366 4283	955	0.633 5717	9.988 5678	49	40	
	30	9.355 0867	905	9.366 5238	954	0.633 4762	9.988 5629	49	30	
	40	9.355 1772	905	9.366 6192	954	0.633 3808	9.988 5580	49	20	
	50	9.355 2677	905	9.366 7146	954	0.633 2854	9.988 5531	49	10	
6	0	9.355 3582	905	9.366 8100	954	0.633 1900	9.988 5482	49	0	54
	10	9.355 4487	904	9.366 9054	953	0.633 0946	9.988 5433	49	50	
	20	9.355 5391	905	9.367 0007	953	0.632 9993	9.988 5384	49	40	
	30	9.355 6296	904	9.367 0960	954	0.632 9040	9.988 5335	49	30	
	40	9.355 7200	904	9.367 1914	952	0.632 8086	9.988 5286	49	20	
	50	9.355 8104	903	9.367 2866	953	0.632 7134	9.988 5237	49	10	
7	0	9.355 9007	904	9.367 3819	953	0.632 6181	9.988 5188	49	0	53
	10	9.355 9911	903	9.367 4772	952	0.632 5228	9.988 5139	49	50	
	20	9.356 0814	903	9.367 5724	952	0.632 4276	9.988 5090	49	40	
	30	9.356 1717	903	9.367 6676	952	0.632 3324	9.988 5041	49	30	
	40	9.356 2620	903	9.367 7628	952	0.632 2372	9.988 4992	49	20	
	50	9.356 3523	903	9.367 8580	952	0.632 1420	9.988 4943	49	10	
8	0	9.356 4426	902	9.367 9532	951	0.632 0468	9.988 4894	49	0	52
	10	9.356 5328	902	9.368 0483	952	0.631 9517	9.988 4845	50	50	
	20	9.356 6230	902	9.368 1435	951	0.631 8565	9.988 4795	49	40	
	30	9.356 7132	902	9.368 2386	951	0.631 7614	9.988 4746	49	30	
	40	9.356 8034	901	9.368 3337	950	0.631 6663	9.988 4697	49	20	
	50	9.356 8935	901	9.368 4287	951	0.631 5713	9.988 4648	49	10	
9	0	9.356 9836	902	9.368 5238	950	0.631 4762	9.988 4599	49	0	51
	10	9.357 0738	901	9.368 6188	950	0.631 3812	9.988 4550	50	50	
	20	9.357 1639	900	9.368 7138	950	0.631 2862	9.988 4500	49	40	
	30	9.357 2539	901	9.368 8088	950	0.631 1912	9.988 4451	49	30	
	40	9.357 3440	900	9.368 9038	950	0.631 0962	9.988 4402	49	20	
	50	9.357 4340	900	9.368 9988	949	0.631 0012	9.988 4353	50	10	
10	0	9.357 5240		9.369 0937		0.630 9063	9.988 4303		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

13°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.357 5240	900	9.369 0937	949	0.630 9063	9.988 4303	49	0	50
	10	9.357 6140	900	9.369 1886	949	0.630 8114	9.988 4254	49	50	
	20	9.357 7040	900	9.369 2835	949	0.630 7165	9.988 4205	49	40	
	30	9.357 7940	899	9.369 3784	949	0.630 6216	9.988 4156	50	30	
	40	9.357 8839	899	9.369 4733	948	0.630 5267	9.988 4106	49	20	
	50	9.357 9738	899	9.369 5681	948	0.630 4319	9.988 4057	49	10	
11	0	9.358 0637	899	9.369 6629	948	0.630 3371	9.988 4008	50	0	49
	10	9.358 1536	898	9.369 7577	948	0.630 2423	9.988 3958	49	50	
	20	9.358 2434	899	9.369 8525	948	0.630 1475	9.988 3909	49	40	
	30	9.358 3333	898	9.369 9473	948	0.630 0527	9.988 3860	50	30	
	40	9.358 4231	898	9.370 0421	947	0.629 9579	9.988 3810	49	20	
	50	9.358 5129	898	9.370 1368	947	0.629 8632	9.988 3761	49	10	
12	0	9.358 6027	897	9.370 2315	947	0.629 7685	9.988 3712	50	0	48
	10	9.358 6924	898	9.370 3262	947	0.629 6738	9.988 3662	49	50	
	20	9.358 7822	897	9.370 4209	947	0.629 5791	9.988 3613	50	40	
	30	9.358 8719	897	9.370 5156	946	0.629 4844	9.988 3563	49	30	
	40	9.358 9616	897	9.370 6102	946	0.629 3898	9.988 3514	50	20	
	50	9.359 0513	896	9.370 7048	946	0.629 2952	9.988 3464	49	10	
13	0	9.359 1409	897	9.370 7994	946	0.629 2006	9.988 3415	49	0	47
	10	9.359 2306	896	9.370 8940	946	0.629 1060	9.988 3366	50	50	
	20	9.359 3202	896	9.370 9886	945	0.629 0114	9.988 3316	49	40	
	30	9.359 4098	896	9.371 0831	946	0.628 9169	9.988 3267	50	30	
	40	9.359 4994	896	9.371 1777	945	0.628 8223	9.988 3217	49	20	
	50	9.359 5890	895	9.371 2722	945	0.628 7278	9.988 3168	50	10	
14	0	9.359 6785	895	9.371 3667	945	0.628 6333	9.988 3118	49	0	46
	10	9.359 7680	895	9.371 4612	944	0.628 5388	9.988 3069	50	50	
	20	9.359 8575	895	9.371 5556	945	0.628 4444	9.988 3019	49	40	
	30	9.359 9470	895	9.371 6501	944	0.628 3499	9.988 2970	50	30	
	40	9.360 0365	894	9.371 7445	944	0.628 2555	9.988 2920	50	20	
	50	9.360 1259	895	9.371 8389	944	0.628 1611	9.988 2870	49	10	
15	0	9.360 2154	894	9.371 9333	943	0.628 0667	9.988 2821	50	0	45
	10	9.360 3048	894	9.372 0276	944	0.627 9724	9.988 2771	49	50	
	20	9.360 3942	893	9.372 1220	943	0.627 8780	9.988 2722	50	40	
	30	9.360 4835	894	9.372 2163	943	0.627 7837	9.988 2672	50	30	
	40	9.360 5729	893	9.372 3106	943	0.627 6894	9.988 2622	49	20	
	50	9.360 6622	893	9.372 4049	943	0.627 5951	9.988 2573	50	10	
16	0	9.360 7515	893	9.372 4992	942	0.627 5008	9.988 2523	49	0	44
	10	9.360 8408	893	9.372 5934	943	0.627 4066	9.988 2474	50	50	
	20	9.360 9301	892	9.372 6877	942	0.627 3123	9.988 2424	50	40	
	30	9.361 0193	893	9.372 7819	942	0.627 2181	9.988 2374	49	30	
	40	9.361 1086	892	9.372 8761	942	0.627 1239	9.988 2325	50	20	
	50	9.361 1978	892	9.372 9703	942	0.627 0297	9.988 2275	50	10	
17	0	9.361 2870	892	9.373 0645	941	0.626 9355	9.988 2225	50	0	43
	10	9.361 3762	891	9.373 1586	941	0.626 8414	9.988 2175	49	50	
	20	9.361 4653	891	9.373 2527	941	0.626 7473	9.988 2126	50	40	
	30	9.361 5544	892	9.373 3468	941	0.626 6532	9.988 2076	50	30	
	40	9.361 6436	891	9.373 4409	941	0.626 5591	9.988 2026	50	20	
	50	9.361 7327	890	9.373 5350	941	0.626 4650	9.988 1976	49	10	
18	0	9.361 8217	891	9.373 6291	940	0.626 3709	9.988 1927	50	0	42
	10	9.361 9108	890	9.373 7231	940	0.626 2769	9.988 1877	50	50	
	20	9.361 9998	891	9.373 8171	940	0.626 1829	9.988 1827	50	40	
	30	9.362 0889	890	9.373 9111	940	0.626 0889	9.988 1777	49	30	
	40	9.362 1779	889	9.374 0051	940	0.625 9949	9.988 1728	50	20	
	50	9.362 2668	890	9.374 0991	939	0.625 9009	9.988 1678	50	10	
19	0	9.362 3558	890	9.374 1930	940	0.625 8070	9.988 1628	50	0	41
	10	9.362 4448	889	9.374 2870	939	0.625 7130	9.988 1578	50	50	
	20	9.362 5337	889	9.374 3809	939	0.625 6191	9.988 1528	50	40	
	30	9.362 6226	889	9.374 4748	938	0.625 5252	9.988 1478	50	30	
	40	9.362 7115	888	9.374 5686	939	0.625 4314	9.988 1428	49	20	
	50	9.362 8003	889	9.374 6625	938	0.625 3375	9.988 1379	50	10	
20	0	9.362 8892		9.374 7563		0.625 2437	9.988 1329		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	945
1	94.5
2	189.0
3	283.5
4	378.0
5	472.5
6	567.0
7	661.5
8	756.0
9	850.5

	940
1	94.0
2	188.0
3	282.0
4	376.0
5	470.0
6	564.0
7	658.0
8	752.0
9	846.0

	900
1	90.0
2	180.0
3	270.0
4	360.0
5	450.0
6	540.0
7	630.0
8	720.0
9	810.0

	895
1	89.5
2	179.0
3	268.5
4	358.0
5	447.5
6	537.0
7	626.5
8	716.0
9	805.5

	890
1	89.0
2	178.0
3	267.0
4	356.0
5	445.0
6	534.0
7	623.0
8	712.0
9	801.0

	50
1	5.0
2	10.0
3	15.0
4	20.0
5	25.0
6	30.0
7	35.0
8	40.0
9	45.0

76°

13°

	935
1	93.5
2	187.0
3	280.5
4	374.0
5	467.5
6	561.0
7	654.5
8	748.0
9	841.5

	930
1	93.0
2	186.0
3	279.0
4	372.0
5	465.0
6	558.0
7	651.0
8	744.0
9	837.0

	890
1	89.0
2	178.0
3	267.0
4	356.0
5	445.0
6	534.0
7	623.0
8	712.0
9	801.0

	885
1	88.5
2	177.0
3	265.5
4	354.0
5	442.5
6	531.0
7	619.5
8	708.0
9	796.5

	880
1	88.0
2	176.0
3	264.0
4	352.0
5	440.0
6	528.0
7	616.0
8	704.0
9	792.0

	50
1	5.0
2	10.0
3	15.0
4	20.0
5	25.0
6	30.0
7	35.0
8	40.0
9	45.0

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.362 8892	888	9.374 7563	938	0.625 2437	9.988 1329	50	0	40
	10	9.362 9780	888	9.374 8501	938	0.625 1499	9.988 1279	50	50	
	20	9.363 0668	888	9.374 9439	938	0.625 0561	9.988 1229	50	40	
	30	9.363 1556	888	9.375 0377	938	0.624 9623	9.988 1179	50	30	
	40	9.363 2444	887	9.375 1315	937	0.624 8685	9.988 1129	50	20	
	50	9.363 3331	888	9.375 2252	938	0.624 7748	9.988 1079	50	10	
21	0	9.363 4219	887	9.375 3190	937	0.624 6810	9.988 1029	50	0	39
	10	9.363 5106	887	9.375 4127	937	0.624 5873	9.988 0979	50	50	
	20	9.363 5993	887	9.375 5064	937	0.624 4936	9.988 0929	50	40	
	30	9.363 6880	886	9.375 6001	936	0.624 3999	9.988 0879	50	30	
	40	9.363 7766	887	9.375 6937	936	0.624 3063	9.988 0829	50	20	
	50	9.363 8653	886	9.375 7873	937	0.624 2127	9.988 0779	50	10	
22	0	9.363 9539	886	9.375 8810	936	0.624 1190	9.988 0729	50	0	38
	10	9.364 0425	886	9.375 9746	936	0.624 0254	9.988 0679	50	50	
	20	9.364 1311	885	9.376 0682	935	0.623 9318	9.988 0629	50	40	
	30	9.364 2196	886	9.376 1617	936	0.623 8383	9.988 0579	50	30	
	40	9.364 3082	885	9.376 2553	935	0.623 7447	9.988 0529	50	20	
	50	9.364 3967	885	9.376 3488	935	0.623 6512	9.988 0479	50	10	
23	0	9.364 4852	885	9.376 4423	935	0.623 5577	9.988 0429	50	0	37
	10	9.364 5737	884	9.376 5358	935	0.623 4642	9.988 0379	51	50	
	20	9.364 6621	885	9.376 6293	935	0.623 3707	9.988 0328	50	40	
	30	9.364 7506	884	9.376 7228	934	0.623 2772	9.988 0278	50	30	
	40	9.364 8390	884	9.376 8162	934	0.623 1838	9.988 0228	50	20	
	50	9.364 9274	884	9.376 9096	934	0.623 0904	9.988 0178	50	10	
24	0	9.365 0158	884	9.377 0030	934	0.622 9970	9.988 0128	50	0	36
	10	9.365 1042	883	9.377 0964	934	0.622 9036	9.988 0078	50	50	
	20	9.365 1925	884	9.377 1898	933	0.622 8102	9.988 0028	51	40	
	30	9.365 2809	883	9.377 2831	934	0.622 7169	9.987 9977	50	30	
	40	9.365 3692	883	9.377 3765	933	0.622 6235	9.987 9927	50	20	
	50	9.365 4575	883	9.377 4698	933	0.622 5302	9.987 9877	50	10	
25	0	9.365 5458	882	9.377 5631	933	0.622 4369	9.987 9827	50	0	35
	10	9.365 6340	882	9.377 6564	932	0.622 3436	9.987 9777	51	50	
	20	9.365 7222	883	9.377 7496	933	0.622 2504	9.987 9726	50	40	
	30	9.365 8105	882	9.377 8429	932	0.622 1571	9.987 9676	50	30	
	40	9.365 8987	882	9.377 9361	932	0.622 0639	9.987 9626	50	20	
	50	9.365 9869	881	9.378 0293	932	0.621 9707	9.987 9576	51	10	
26	0	9.366 0750	882	9.378 1225	932	0.621 8775	9.987 9525	50	0	34
	10	9.366 1632	881	9.378 2157	931	0.621 7843	9.987 9475	50	50	
	20	9.366 2513	881	9.378 3088	932	0.621 6912	9.987 9425	51	40	
	30	9.366 3394	881	9.378 4020	931	0.621 5980	9.987 9374	50	30	
	40	9.366 4275	880	9.378 4951	931	0.621 5049	9.987 9324	50	20	
	50	9.366 5155	881	9.378 5882	931	0.621 4118	9.987 9274	51	10	
27	0	9.366 6036	880	9.378 6813	930	0.621 3187	9.987 9223	50	0	33
	10	9.366 6916	880	9.378 7743	931	0.621 2257	9.987 9173	50	50	
	20	9.366 7796	880	9.378 8674	930	0.621 1326	9.987 9123	51	40	
	30	9.366 8676	880	9.378 9604	930	0.621 0396	9.987 9072	50	30	
	40	9.366 9556	880	9.379 0534	930	0.620 9466	9.987 9022	51	20	
	50	9.367 0436	879	9.379 1464	930	0.620 8536	9.987 8971	50	10	
28	0	9.367 1315	879	9.379 2394	930	0.620 7606	9.987 8921	50	0	32
	10	9.367 2194	879	9.379 3324	929	0.620 6676	9.987 8871	51	50	
	20	9.367 3073	879	9.379 4253	929	0.620 5747	9.987 8820	50	40	
	30	9.367 3952	878	9.379 5182	929	0.620 4818	9.987 8770	51	30	
	40	9.367 4830	879	9.379 6111	929	0.620 3889	9.987 8719	50	20	
	50	9.367 5709	878	9.379 7040	929	0.620 2960	9.987 8669	51	10	
29	0	9.367 6587	878	9.379 7969	928	0.620 2031	9.987 8618	50	0	31
	10	9.367 7465	878	9.379 8897	929	0.620 1103	9.987 8568	51	50	
	20	9.367 8343	878	9.379 9826	928	0.620 0174	9.987 8517	50	40	
	30	9.367 9221	877	9.380 0754	928	0.619 9246	9.987 8467	51	30	
	40	9.368 0098	877	9.380 1682	928	0.619 8318	9.987 8416	50	20	
	50	9.368 0975	878	9.380 2610	927	0.619 7390	9.987 8366	51	10	
30	0	9.368 1853		9.380 3537		0.619 6463	9.987 8315		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

76°

13°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.368 1853	876	9.380 3537	928	0.619 6463	9.987 8315	50	0	30
	10	9.368 2729	877	9.380 4465	927	0.619 5535	9.987 8265	51	50	
	20	9.368 3606	877	9.380 5392	927	0.619 4608	9.987 8214	51	40	
	30	9.368 4483	876	9.380 6319	927	0.619 3681	9.987 8163	50	30	
	40	9.368 5359	876	9.380 7246	927	0.619 2754	9.987 8113	51	20	
	50	9.368 6235	876	9.380 8173	927	0.619 1827	9.987 8062	50	10	
31	0	9.368 7111	876	9.380 9100	926	0.619 0900	9.987 8012	51	0	29
	10	9.368 7987	876	9.381 0026	926	0.618 9974	9.987 7961	51	50	
	20	9.368 8863	875	9.381 0952	926	0.618 9048	9.987 7910	50	40	
	30	9.368 9738	875	9.381 1878	926	0.618 8122	9.987 7860	51	30	
	40	9.369 0613	875	9.381 2804	926	0.618 7196	9.987 7809	51	20	
	50	9.369 1488	875	9.381 3730	925	0.618 6270	9.987 7758	50	10	
32	0	9.369 2363	875	9.381 4655	926	0.618 5345	9.987 7708	51	0	28
	10	9.369 3238	874	9.381 5581	925	0.618 4419	9.987 7657	51	50	
	20	9.369 4112	875	9.381 6506	925	0.618 3494	9.987 7606	50	40	
	30	9.369 4987	874	9.381 7431	925	0.618 2569	9.987 7556	51	30	
	40	9.369 5861	874	9.381 8356	924	0.618 1644	9.987 7505	51	20	
	50	9.369 6735	873	9.381 9280	925	0.618 0720	9.987 7454	50	10	
33	0	9.369 7608	874	9.382 0205	924	0.617 9795	9.987 7404	51	0	27
	10	9.369 8482	873	9.382 1129	924	0.617 8871	9.987 7353	51	50	
	20	9.369 9355	874	9.382 2053	924	0.617 7947	9.987 7302	51	40	
	30	9.370 0229	873	9.382 2977	924	0.617 7023	9.987 7251	51	30	
	40	9.370 1102	872	9.382 3901	924	0.617 6099	9.987 7200	50	20	
	50	9.370 1974	873	9.382 4825	923	0.617 5175	9.987 7150	51	10	
34	0	9.370 2847	872	9.382 5748	923	0.617 4252	9.987 7099	51	0	26
	10	9.370 3719	873	9.382 6671	924	0.617 3329	9.987 7048	51	50	
	20	9.370 4592	872	9.382 7595	922	0.617 2405	9.987 6997	51	40	
	30	9.370 5464	872	9.382 8517	923	0.617 1483	9.987 6946	50	30	
	40	9.370 6336	871	9.382 9440	923	0.617 0560	9.987 6896	51	20	
	50	9.370 7207	872	9.383 0363	922	0.616 9637	9.987 6845	51	10	
35	0	9.370 8079	871	9.383 1285	922	0.616 8715	9.987 6794	51	0	25
	10	9.370 8950	871	9.383 2207	922	0.616 7793	9.987 6743	51	50	
	20	9.370 9821	871	9.383 3129	922	0.616 6871	9.987 6692	51	40	
	30	9.371 0692	871	9.383 4051	922	0.616 5949	9.987 6641	51	30	
	40	9.371 1563	871	9.383 4973	921	0.616 5027	9.987 6590	51	20	
	50	9.371 2434	870	9.383 5894	922	0.616 4106	9.987 6539	51	10	
36	0	9.371 3304	870	9.383 6816	921	0.616 3184	9.987 6488	51	0	24
	10	9.371 4174	870	9.383 7737	921	0.616 2263	9.987 6437	51	50	
	20	9.371 5044	870	9.383 8658	921	0.616 1342	9.987 6386	50	40	
	30	9.371 5914	870	9.383 9579	920	0.616 0421	9.987 6336	51	30	
	40	9.371 6784	869	9.384 0499	921	0.615 9501	9.987 6285	51	20	
	50	9.371 7653	870	9.384 1420	920	0.615 8580	9.987 6234	51	10	
37	0	9.371 8523	869	9.384 2340	920	0.615 7660	9.987 6183	51	0	23
	10	9.371 9392	869	9.384 3260	920	0.615 6740	9.987 6132	51	50	
	20	9.372 0261	869	9.384 4180	920	0.615 5820	9.987 6081	51	40	
	30	9.372 1130	868	9.384 5100	920	0.615 4900	9.987 6030	52	30	
	40	9.372 1998	869	9.384 6020	919	0.615 3980	9.987 5978	51	20	
	50	9.372 2867	868	9.384 6939	919	0.615 3061	9.987 5927	51	10	
38	0	9.372 3735	868	9.384 7858	919	0.615 2142	9.987 5876	51	0	22
	10	9.372 4603	868	9.384 8777	919	0.615 1223	9.987 5825	51	50	
	20	9.372 5471	867	9.384 9696	919	0.615 0304	9.987 5774	51	40	
	30	9.372 6338	868	9.385 0615	919	0.614 9385	9.987 5723	51	30	
	40	9.372 7206	867	9.385 1534	918	0.614 8466	9.987 5672	51	20	
	50	9.372 8073	867	9.385 2452	918	0.614 7548	9.987 5621	51	10	
39	0	9.372 8940	867	9.385 3370	918	0.614 6630	9.987 5570	51	0	21
	10	9.372 9807	867	9.385 4288	918	0.614 5712	9.987 5519	52	50	
	20	9.373 0674	866	9.385 5206	918	0.614 4794	9.987 5467	51	40	
	30	9.373 1540	867	9.385 6124	917	0.614 3876	9.987 5416	51	30	
	40	9.373 2407	866	9.385 7041	918	0.614 2959	9.987 5365	51	20	
	50	9.373 3273	866	9.385 7959	917	0.614 2041	9.987 5314	51	10	
40	0	9.373 4139		9.385 8876		0.614 1124	9.987 5263		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

76°

	925
1	92.5
2	185.0
3	277.5
4	370.0
5	462.5
6	555.0
7	647.5
8	740.0
9	832.5

	920
1	92.0
2	184.0
3	276.0
4	368.0
5	460.0
6	552.0
7	644.0
8	736.0
9	828.0

	875
1	87.5
2	175.0
3	262.5
4	350.0
5	437.5
6	525.0
7	612.5
8	700.0
9	787.5

	870
1	87.0
2	174.0
3	261.0
4	348.0
5	435.0
6	522.0
7	609.0
8	696.0
9	783.0

	865
1	86.5
2	173.0
3	259.5
4	346.0
5	432.5
6	519.0
7	605.5
8	692.0
9	778.5

	51
1	5.1
2	10.2
3	15.3
4	20.4
5	25.5
6	30.6
7	35.7
8	40.8
9	45.9

13°

915	
1	91.5
2	183.0
3	274.5
4	366.0
5	457.5
6	549.0
7	640.5
8	732.0
9	823.5

910	
1	91.0
2	182.0
3	273.0
4	364.0
5	455.0
6	546.0
7	637.0
8	728.0
9	819.0

865	
1	86.5
2	173.0
3	259.5
4	346.0
5	432.5
6	519.0
7	605.5
8	692.0
9	778.5

860	
1	86.0
2	172.0
3	258.0
4	344.0
5	430.0
6	516.0
7	602.0
8	688.0
9	774.0

855	
1	85.5
2	171.0
3	256.5
4	342.0
5	427.5
6	513.0
7	598.5
8	684.0
9	769.5

51	
1	5.1
2	10.2
3	15.3
4	20.4
5	25.5
6	30.6
7	35.7
8	40.8
9	45.9

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.373 4139	866	9.385 8876	917	0.614 1124	9.987 5263	51	0	20
	10	9.373 5005	865	9.385 9793	917	0.614 0207	9.987 5212	52	50	
	20	9.373 5870	866	9.386 0710	917	0.613 9290	9.987 5160	51	40	
	30	9.373 6736	865	9.386 1627	916	0.613 8373	9.987 5109	51	30	
	40	9.373 7601	865	9.386 2543	916	0.613 7457	9.987 5058	51	20	
	50	9.373 8466	865	9.386 3459	917	0.613 6541	9.987 5007	52	10	
41	0	9.373 9331	865	9.386 4376	916	0.613 5624	9.987 4955	51	0	19
	10	9.374 0196	864	9.386 5292	915	0.613 4708	9.987 4904	51	50	
	20	9.374 1060	865	9.386 6207	916	0.613 3793	9.987 4853	51	40	
	30	9.374 1925	864	9.386 7123	915	0.613 2877	9.987 4802	52	30	
	40	9.374 2789	864	9.386 8038	916	0.613 1962	9.987 4750	51	20	
	50	9.374 3653	864	9.386 8954	915	0.613 1046	9.987 4699	51	10	
42	0	9.374 4517	863	9.386 9869	915	0.613 0131	9.987 4648	52	0	18
	10	9.374 5380	864	9.387 0784	915	0.612 9216	9.987 4596	51	50	
	20	9.374 6244	863	9.387 1699	914	0.612 8301	9.987 4545	51	40	
	30	9.374 7107	863	9.387 2613	915	0.612 7387	9.987 4494	52	30	
	40	9.374 7970	863	9.387 3528	914	0.612 6472	9.987 4442	51	20	
	50	9.374 8833	863	9.387 4442	914	0.612 5558	9.987 4391	52	10	
43	0	9.374 9696	862	9.387 5356	914	0.612 4644	9.987 4339	51	0	17
	10	9.375 0558	862	9.387 6270	914	0.612 3730	9.987 4288	51	50	
	20	9.375 1420	863	9.387 7184	913	0.612 2816	9.987 4237	52	40	
	30	0.375 2283	862	9.387 8097	914	0.612 1903	9.987 4185	51	30	
	40	9.375 3145	861	9.387 9011	913	0.612 0989	9.987 4134	52	20	
	50	9.375 4006	862	9.387 9924	913	0.612 0076	9.987 4082	51	10	
44	0	9.375 4868	862	9.388 0837	913	0.611 9163	9.987 4031	52	0	16
	10	9.375 5730	861	9.388 1750	913	0.611 8250	9.987 3979	51	50	
	20	9.375 6591	861	9.388 2663	912	0.611 7337	9.987 3928	51	40	
	30	9.375 7452	861	9.388 3575	913	0.611 6425	9.987 3877	52	30	
	40	9.375 8313	861	9.388 4488	912	0.611 5512	9.987 3825	51	20	
	50	9.375 9174	860	9.388 5400	912	0.611 4600	9.987 3774	52	10	
45	0	9.376 0034	860	9.388 6312	912	0.611 3688	9.987 3722	52	0	15
	10	9.376 0894	861	9.388 7224	912	0.611 2776	9.987 3670	51	50	
	20	9.376 1755	860	9.388 8136	911	0.611 1864	9.987 3619	52	40	
	30	9.376 2615	859	9.388 9047	912	0.611 0953	9.987 3567	51	30	
	40	9.376 3474	860	9.388 9959	911	0.611 0041	9.987 3516	52	20	
	50	9.376 4334	860	9.389 0870	911	0.610 9130	9.987 3464	51	10	
46	0	9.376 5194	859	9.389 1781	911	0.610 8219	9.987 3413	52	0	14
	10	9.376 6053	859	9.389 2692	910	0.610 7308	9.987 3361	52	50	
	20	9.376 6912	859	9.389 3602	911	0.610 6398	9.987 3309	51	40	
	30	9.376 7771	859	9.389 4513	910	0.610 5487	9.987 3258	52	30	
	40	9.376 8630	858	9.389 5423	911	0.610 4577	9.987 3206	51	20	
	50	9.376 9488	859	9.389 6334	910	0.610 3666	9.987 3155	52	10	
47	0	9.377 0347	858	9.389 7244	909	0.610 2756	9.987 3103	52	0	13
	10	9.377 1205	858	9.389 8153	910	0.610 1847	9.987 3051	51	50	
	20	9.377 2063	858	9.389 9063	910	0.610 0937	9.987 3000	52	40	
	30	9.377 2921	857	9.389 9973	909	0.610 0027	9.987 2948	52	30	
	40	9.377 3778	858	9.390 0882	909	0.609 9118	9.987 2896	51	20	
	50	9.377 4636	857	9.390 1791	909	0.609 8209	9.987 2845	52	10	
48	0	9.377 5493	857	9.390 2700	909	0.609 7300	9.987 2793	52	0	12
	10	9.377 6350	857	9.390 3609	909	0.609 6391	9.987 2741	52	50	
	20	9.377 7207	857	9.390 4518	908	0.609 5482	9.987 2689	51	40	
	30	9.377 8064	856	9.390 5426	909	0.609 4574	9.987 2638	52	30	
	40	9.377 8920	857	9.390 6335	908	0.609 3665	9.987 2586	52	20	
	50	9.377 9777	856	9.390 7243	908	0.609 2757	9.987 2534	52	10	
49	0	9.378 0633	856	9.390 8151	908	0.609 1849	9.987 2482	51	0	11
	10	9.378 1489	856	9.390 9059	907	0.609 0941	9.987 2431	52	50	
	20	9.378 2345	856	9.390 9966	908	0.609 0034	9.987 2379	52	40	
	30	9.378 3201	855	9.391 0874	907	0.608 9126	9.987 2327	52	30	
	40	9.378 4056	856	9.391 1781	907	0.608 8219	9.987 2275	52	20	
	50	9.378 4912	855	9.391 2688	907	0.608 7312	9.987 2223	52	10	
50	0	9.378 5767		9.391 3595		0.608 6405	9.987 2171		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

13°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	
50	0	9.378 5767	855	9.391 3595	907	0.608 6405	9.987 2171	51	0	10
	10	9.378 6622	854	9.391 4502	907	0.608 5498	9.987 2120	52	50	
	20	9.378 7476	855	9.391 5409	906	0.608 4591	9.987 2068	52	40	
	30	9.378 8331	855	9.391 6315	907	0.608 3685	9.987 2016	52	30	
	40	9.378 9186	854	9.391 7222	906	0.608 2778	9.987 1964	52	20	
	50	9.379 0040	854	9.391 8128	906	0.608 1872	9.987 1912	52	10	
51	0	9.379 0894	854	9.391 9034	906	0.608 0966	9.987 1860	52	0	9
	10	9.379 1748	854	9.391 9940	905	0.608 0060	9.987 1808	52	50	
	20	9.379 2602	853	9.392 0845	906	0.607 9155	9.987 1756	52	40	
	30	9.379 3455	853	9.392 1751	905	0.607 8249	9.987 1704	52	30	
	40	9.379 4308	854	9.392 2656	905	0.607 7344	9.987 1652	51	20	
	50	9.379 5162	853	9.392 3561	905	0.607 6439	9.987 1601	52	10	
52	0	9.379 6015	852	9.392 4466	905	0.607 5534	9.987 1549	52	0	8
	10	9.379 6867	853	9.392 5371	905	0.607 4629	9.987 1497	52	50	
	20	9.379 7720	853	9.392 6276	904	0.607 3724	9.987 1445	52	40	
	30	9.379 8573	852	9.392 7180	904	0.607 2820	9.987 1393	52	30	
	40	9.379 9425	852	9.392 8084	905	0.607 1916	9.987 1341	52	20	
	50	9.380 0277	852	9.392 8989	904	0.607 1011	9.987 1289	53	10	
53	0	9.380 1129	852	9.392 9893	903	0.607 0107	9.987 1236	52	0	7
	10	9.380 1981	851	9.393 0796	904	0.606 9204	9.987 1184	52	50	
	20	9.380 2832	852	9.393 1700	904	0.606 8300	9.987 1132	52	40	
	30	9.380 3684	851	9.393 2604	903	0.606 7396	9.987 1080	52	30	
	40	9.380 4535	851	9.393 3507	903	0.606 6493	9.987 1028	52	20	
	50	9.380 5386	851	9.393 4410	903	0.606 5590	9.987 0976	52	10	
54	0	9.380 6237	851	9.393 5313	903	0.606 4687	9.987 0924	52	0	6
	10	9.380 7088	850	9.393 6216	902	0.606 3784	9.987 0872	52	50	
	20	9.380 7938	851	9.393 7118	903	0.606 2882	9.987 0820	52	40	
	30	9.380 8789	850	9.393 8021	902	0.606 1979	9.987 0768	52	30	
	40	9.380 9639	850	9.393 8923	902	0.606 1077	9.987 0716	53	20	
	50	9.381 0489	850	9.393 9825	902	0.606 0175	9.987 0663	52	10	
55	0	9.381 1339	849	9.394 0727	902	0.605 9273	9.987 0611	52	0	5
	10	9.381 2188	850	9.394 1629	902	0.605 8371	9.987 0559	52	50	
	20	9.381 3038	849	9.394 2531	901	0.605 7469	9.987 0507	52	40	
	30	9.381 3887	849	9.394 3432	902	0.605 6568	9.987 0455	53	30	
	40	9.381 4736	849	9.394 4334	901	0.605 5666	9.987 0402	52	20	
	50	9.381 5585	849	9.394 5235	901	0.605 4765	9.987 0350	52	10	
56	0	9.381 6434	849	9.394 6136	901	0.605 3864	9.987 0298	52	0	4
	10	9.381 7283	848	9.394 7037	900	0.605 2963	9.987 0246	53	50	
	20	9.381 8131	848	9.394 7937	901	0.605 2063	9.987 0193	52	40	
	30	9.381 8979	848	9.394 8838	900	0.605 1162	9.987 0141	52	30	
	40	9.381 9827	848	9.394 9738	900	0.605 0262	9.987 0089	52	20	
	50	9.382 0675	848	9.395 0638	900	0.604 9362	9.987 0037	53	10	
57	0	9.382 1523	847	9.395 1538	900	0.604 8462	9.986 9984	52	0	3
	10	9.382 2370	848	9.395 2438	900	0.604 7562	9.986 9932	52	50	
	20	9.382 3218	847	9.395 3338	900	0.604 6662	9.986 9880	53	40	
	30	9.382 4065	847	9.395 4238	899	0.604 5762	9.986 9827	52	30	
	40	9.382 4912	847	9.395 5137	899	0.604 4863	9.986 9775	52	20	
	50	9.382 5759	846	9.395 6036	899	0.604 3964	9.986 9723	53	10	
58	0	9.382 6605	847	9.395 6935	899	0.604 3065	9.986 9670	52	0	2
	10	9.382 7452	846	9.395 7834	899	0.604 2166	9.986 9618	52	50	
	20	9.382 8298	846	9.395 8733	898	0.604 1267	9.986 9566	53	40	
	30	9.382 9144	846	9.395 9631	899	0.604 0369	9.986 9513	52	30	
	40	9.382 9990	846	9.396 0530	898	0.603 9470	9.986 9461	53	20	
	50	9.383 0836	846	9.396 1428	898	0.603 8572	9.986 9408	52	10	
59	0	9.383 1682	845	9.396 2326	898	0.603 7674	9.986 9356	52	0	1
	10	9.383 2527	845	9.396 3224	897	0.603 6776	9.986 9304	53	50	
	20	9.383 3372	846	9.396 4121	898	0.603 5879	9.986 9251	52	40	
	30	9.383 4218	844	9.396 5019	897	0.603 4981	9.986 9199	53	30	
	40	9.383 5062	845	9.396 5916	898	0.603 4084	9.986 9146	52	20	
	50	9.383 5907	845	9.396 6814	897	0.603 3186	9.986 9094	53	10	
60	0	9.383 6752		9.396 7711		0.603 2289	9.986 9041		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

905	
1	90.5
2	181.0
3	271.5
4	362.0
5	452.5
6	543.0
7	633.5
8	724.0
9	814.5

900	
1	90.0
2	180.0
3	270.0
4	360.0
5	450.0
6	540.0
7	630.0
8	720.0
9	810.0

895	
1	89.5
2	179.0
3	268.5
4	358.0
5	447.5
6	537.0
7	626.5
8	716.0
9	805.5

850	
1	85.0
2	170.0
3	255.0
4	340.0
5	425.0
6	510.0
7	595.0
8	680.0
9	765.0

845	
1	84.5
2	169.0
3	253.5
4	338.0
5	422.5
6	507.0
7	591.5
8	676.0
9	760.5

52	
1	5.2
2	10.4
3	15.6
4	20.8
5	26.0
6	31.2
7	36.4
8	41.6
9	46.8

76°

14°

895	
1	89.5
2	179.0
3	268.5
4	358.0
5	447.5
6	537.0
7	626.5
8	716.0
9	805.5

890	
1	89.0
2	178.0
3	267.0
4	356.0
5	445.0
6	534.0
7	623.0
8	712.0
9	801.0

845	
1	84.5
2	169.0
3	253.5
4	338.0
5	422.5
6	507.0
7	591.5
8	676.0
9	760.5

840	
1	84.0
2	168.0
3	252.0
4	336.0
5	420.0
6	504.0
7	588.0
8	672.0
9	756.0

835	
1	83.5
2	167.0
3	250.5
4	334.0
5	417.5
6	501.0
7	584.5
8	668.0
9	751.5

52	
1	5.2
2	10.4
3	15.6
4	20.8
5	26.0
6	31.2
7	36.4
8	41.6
9	46.8

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.383 6752	844	9.396 7711	896	0.603 2289	9.986 9041	52	0	60
	10	9.383 7596	844	9.396 8607	897	0.603 1393	9.986 8989	53	50	
	20	9.383 8440	844	9.396 9504	897	0.603 0496	9.986 8936	52	40	
	30	9.383 9284	844	9.397 0401	896	0.602 9599	9.986 8884	53	30	
	40	9.384 0128	844	9.397 1297	896	0.602 8703	9.986 8831	52	20	
	50	9.384 0972	843	9.397 2193	896	0.602 7807	9.986 8779	53	10	
1	0	9.384 1815	844	9.397 3089	896	0.602 6911	9.986 8726	53	0	59
	10	9.384 2659	843	9.397 3985	896	0.602 6015	9.986 8673	52	50	
	20	9.384 3502	843	9.397 4881	896	0.602 5119	9.986 8621	53	40	
	30	9.384 4345	843	9.397 5777	895	0.602 4223	9.986 8568	52	30	
	40	9.384 5188	842	9.397 6672	895	0.602 3328	9.986 8516	53	20	
	50	9.384 6030	843	9.397 7567	896	0.602 2433	9.986 8463	53	10	
2	0	9.384 6873	842	9.397 8463	894	0.602 1537	9.986 8410	52	0	58
	10	9.384 7715	842	9.397 9357	895	0.602 0643	9.986 8358	53	50	
	20	9.384 8557	842	9.398 0252	895	0.601 9748	9.986 8305	52	40	
	30	9.384 9399	842	9.398 1147	894	0.601 8853	9.986 8253	53	30	
	40	9.385 0241	842	9.398 2041	895	0.601 7959	9.986 8200	53	20	
	50	9.385 1083	841	9.398 2936	894	0.601 7064	9.986 8147	53	10	
3	0	9.385 1924	841	9.398 3830	894	0.601 6170	9.986 8094	52	0	57
	10	9.385 2765	842	9.398 4724	893	0.601 5276	9.986 8042	53	50	
	20	9.385 3607	840	9.398 5617	894	0.601 4383	9.986 7989	53	40	
	30	9.385 4447	841	9.398 6511	894	0.601 3489	9.986 7936	52	30	
	40	9.385 5288	841	9.398 7405	893	0.601 2595	9.986 7884	53	20	
	50	9.385 6129	840	9.398 8298	893	0.601 1702	9.986 7831	53	10	
4	0	9.385 6969	840	9.398 9191	893	0.601 0809	9.986 7778	53	0	56
	10	9.385 7809	840	9.399 0084	893	0.600 9916	9.986 7725	52	50	
	20	9.385 8649	840	9.399 0977	892	0.600 9023	9.986 7673	53	40	
	30	9.385 9489	840	9.399 1869	893	0.600 8131	9.986 7620	53	30	
	40	9.386 0329	840	9.399 2762	892	0.600 7238	9.986 7567	53	20	
	50	9.386 1169	839	9.399 3654	893	0.600 6346	9.986 7514	53	10	
5	0	9.386 2008	839	9.399 4547	892	0.600 5453	9.986 7461	52	0	55
	10	9.386 2847	839	9.399 5439	891	0.600 4561	9.986 7409	53	50	
	20	9.386 3686	839	9.399 6330	892	0.600 3670	9.986 7356	53	40	
	30	9.386 4525	839	9.399 7222	892	0.600 2778	9.986 7303	53	30	
	40	9.386 5364	838	9.399 8114	891	0.600 1886	9.986 7250	53	20	
	50	9.386 6202	838	9.399 9005	891	0.600 0995	9.986 7197	53	10	
6	0	9.386 7040	839	9.399 9896	891	0.600 0104	9.986 7144	53	0	54
	10	9.386 7879	838	9.400 0787	891	0.599 9213	9.986 7091	53	50	
	20	9.386 8717	837	9.400 1678	891	0.599 8322	9.986 7038	52	40	
	30	9.386 9554	838	9.400 2569	890	0.599 7431	9.986 6986	53	30	
	40	9.387 0392	838	9.400 3459	891	0.599 6541	9.986 6933	53	20	
	50	9.387 1230	837	9.400 4350	890	0.599 5650	9.986 6880	53	10	
7	0	9.387 2067	837	9.400 5240	890	0.599 4760	9.986 6827	53	0	53
	10	9.387 2904	837	9.400 6130	890	0.599 3870	9.986 6774	53	50	
	20	9.387 3741	837	9.400 7020	890	0.599 2980	9.986 6721	53	40	
	30	9.387 4578	836	9.400 7910	889	0.599 2090	9.986 6668	53	30	
	40	9.387 5414	837	9.400 8799	890	0.599 1201	9.986 6615	53	20	
	50	9.387 6251	836	9.400 9689	889	0.599 0311	9.986 6562	53	10	
8	0	9.387 7087	836	9.401 0578	889	0.598 9422	9.986 6509	53	0	52
	10	9.387 7923	836	9.401 1467	889	0.598 8533	9.986 6456	53	50	
	20	9.387 8759	836	9.401 2356	889	0.598 7644	9.986 6403	53	40	
	30	9.387 9595	835	9.401 3245	889	0.598 6755	9.986 6350	53	30	
	40	9.388 0430	836	9.401 4134	888	0.598 5866	9.986 6297	53	20	
	50	9.388 1266	835	9.401 5022	888	0.598 4978	9.986 6244	53	10	
9	0	9.388 2101	835	9.401 5910	889	0.598 4090	9.986 6191	54	0	51
	10	9.388 2936	835	9.401 6799	888	0.598 3201	9.986 6137	53	50	
	20	9.388 3771	835	9.401 7687	887	0.598 2313	9.986 6084	53	40	
	30	9.388 4606	834	9.401 8574	888	0.598 1426	9.986 6031	53	30	
	40	9.388 5440	835	9.401 9462	888	0.598 0538	9.986 5978	53	20	
	50	9.388 6275	834	9.402 0350	887	0.597 9650	9.986 5925	53	10	
10	0	9.388 7109		9.402 1237		0.597 8763	9.986 5872		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

75°

14°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.388 7109	834	9.402 1237	887	0.597 8763	9.986 5872	53	0	50
	10	9.388 7943	834	9.402 2124	887	0.597 7876	9.986 5819	53	50	
	20	9.388 8777	834	9.402 3011	887	0.597 6989	9.986 5766	54	40	
	30	9.388 9611	833	9.402 3898	887	0.597 6102	9.986 5712	53	30	
	40	9.389 0444	833	9.402 4785	886	0.597 5215	9.986 5659	53	20	
	50	9.389 1277	834	9.402 5671	887	0.597 4329	9.986 5606	53	10	
11	0	9.389 2111	833	9.402 6558	886	0.597 3442	9.986 5553	53	0	49
	10	9.389 2944	833	9.402 7444	886	0.597 2556	9.986 5500	54	50	
	20	9.389 3777	832	9.402 8330	886	0.597 1670	9.986 5446	53	40	
	30	9.389 4609	833	9.402 9216	886	0.597 0784	9.986 5393	53	30	
	40	9.389 5442	832	9.403 0102	885	0.596 9898	9.986 5340	53	20	
	50	9.389 6274	832	9.403 0987	886	0.596 9013	9.986 5287	54	10	
12	0	9.389 7106	832	9.403 1873	885	0.596 8127	9.986 5233	53	0	48
	10	9.389 7938	832	9.403 2758	885	0.596 7242	9.986 5180	53	50	
	20	9.389 8770	832	9.403 3643	885	0.596 6357	9.986 5127	54	40	
	30	9.389 9602	831	9.403 4528	885	0.596 5472	9.986 5073	53	30	
	40	9.390 0433	832	9.403 5413	885	0.596 4587	9.986 5020	53	20	
	50	9.390 1265	831	9.403 6298	884	0.596 3702	9.986 4967	54	10	
13	0	9.390 2096	831	9.403 7182	885	0.596 2818	9.986 4913	53	0	47
	10	9.390 2927	831	9.403 8067	884	0.596 1933	9.986 4860	53	50	
	20	9.390 3758	830	9.403 8951	884	0.596 1049	9.986 4807	54	40	
	30	9.390 4588	831	9.403 9835	884	0.596 0165	9.986 4753	53	30	
	40	9.390 5419	830	9.404 0719	883	0.595 9281	9.986 4700	53	20	
	50	9.390 6249	830	9.404 1602	884	0.595 8398	9.986 4647	54	10	
14	0	9.390 7079	830	9.404 2486	883	0.595 7514	9.986 4593	53	0	46
	10	9.390 7909	830	9.404 3369	884	0.595 6631	9.986 4540	54	50	
	20	9.390 8739	830	9.404 4253	883	0.595 5747	9.986 4486	53	40	
	30	9.390 9569	829	9.404 5136	883	0.595 4864	9.986 4433	54	30	
	40	9.391 0398	829	9.404 6019	882	0.595 3981	9.986 4379	53	20	
	50	9.391 1227	830	9.404 6901	883	0.595 3099	9.986 4326	53	10	
15	0	9.391 2057	828	9.404 7784	882	0.595 2216	9.986 4273	54	0	45
	10	9.391 2885	829	9.404 8666	883	0.595 1334	9.986 4219	53	50	
	20	9.391 3714	829	9.404 9549	882	0.595 0451	9.986 4166	54	40	
	30	9.391 4543	828	9.405 0431	882	0.594 9569	9.986 4112	53	30	
	40	9.391 5371	829	9.405 1313	882	0.594 8687	9.986 4059	54	20	
	50	9.391 6200	828	9.405 2195	881	0.594 7805	9.986 4005	53	10	
16	0	9.391 7028	828	9.405 3076	882	0.594 6924	9.986 3952	54	0	44
	10	9.391 7856	828	9.405 3958	881	0.594 6042	9.986 3898	54	50	
	20	9.391 8684	827	9.405 4839	881	0.594 5161	9.986 3844	53	40	
	30	9.391 9511	828	9.405 5720	881	0.594 4280	9.986 3791	54	30	
	40	9.392 0339	827	9.405 6601	881	0.594 3399	9.986 3737	53	20	
	50	9.392 1166	827	9.405 7482	881	0.594 2518	9.986 3684	54	10	
17	0	9.392 1993	827	9.405 8363	880	0.594 1637	9.986 3630	54	0	43
	10	9.392 2820	827	9.405 9243	881	0.594 0757	9.986 3576	53	50	
	20	9.392 3647	826	9.406 0124	880	0.593 9876	9.986 3523	54	40	
	30	9.392 4473	827	9.406 1004	880	0.593 8996	9.986 3469	53	30	
	40	9.392 5300	826	9.406 1884	880	0.593 8116	9.986 3416	54	20	
	50	9.392 6126	826	9.406 2764	880	0.593 7236	9.986 3362	54	10	
18	0	9.392 6952	826	9.406 3644	880	0.593 6356	9.986 3308	53	0	42
	10	9.392 7778	826	9.406 4524	879	0.593 5476	9.986 3255	54	50	
	20	9.392 8604	826	9.406 5403	879	0.593 4597	9.986 3201	54	40	
	30	9.392 9430	825	9.406 6282	879	0.593 3718	9.986 3147	53	30	
	40	9.393 0255	825	9.406 7161	879	0.593 2839	9.986 3094	54	20	
	50	9.393 1080	825	9.406 8040	879	0.593 1960	9.986 3040	54	10	
19	0	9.393 1905	825	9.406 8919	879	0.593 1081	9.986 2986	54	0	41
	10	9.393 2730	825	9.406 9798	878	0.593 0202	9.986 2932	53	50	
	20	9.393 3555	825	9.407 0676	879	0.592 9324	9.986 2879	54	40	
	30	9.393 4380	824	9.407 1555	878	0.592 8445	9.986 2825	54	30	
	40	9.393 5204	824	9.407 2433	878	0.592 7567	9.986 2771	54	20	
	50	9.393 6028	824	9.407 3311	878	0.592 6689	9.986 2717	54	10	
20	0	9.393 6852		9.407 4189		0.592 5811	9.986 2663		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

75°

	885
1	88.5
2	177.0
3	265.5
4	354.0
5	442.5
6	531.0
7	619.5
8	708.0
9	796.5

	880
1	88.0
2	176.0
3	264.0
4	352.0
5	440.0
6	528.0
7	616.0
8	704.0
9	792.0

	830
1	83.0
2	166.0
3	249.0
4	332.0
5	415.0
6	498.0
7	581.0
8	664.0
9	747.0

	825
1	82.5
2	165.0
3	247.5
4	330.0
5	412.5
6	495.0
7	577.5
8	660.0
9	742.5

	53
1	5.3
2	10.6
3	15.9
4	21.2
5	26.5
6	31.8
7	37.1
8	42.4
9	47.7

	54
1	5.4
2	10.8
3	16.2
4	21.6
5	27.0
6	32.4
7	37.8
8	43.2
9	48.6

14°

880	
1	88.0
2	176.0
3	264.0
4	352.0
5	440.0
6	528.0
7	616.0
8	704.0
9	792.0

875	
1	87.5
2	175.0
3	262.5
4	350.0
5	437.5
6	525.0
7	612.5
8	700.0
9	787.5

870	
1	87.0
2	174.0
3	261.0
4	348.0
5	435.0
6	522.0
7	609.0
8	696.0
9	783.0

825	
1	82.5
2	165.0
3	247.5
4	330.0
5	412.5
6	495.0
7	577.5
8	660.0
9	742.5

820	
1	82.0
2	164.0
3	246.0
4	328.0
5	410.0
6	492.0
7	574.0
8	656.0
9	738.0

54	
1	5.4
2	10.8
3	16.2
4	21.6
5	27.0
6	32.4
7	37.8
8	43.2
9	48.6

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.393 6852	824	9.407 4189	878	0.592 5811	9.986 2663	53	0	40
	10	9.393 7676	824	9.407 5067	877	0.592 4933	9.986 2610	54	50	
	20	9.393 8500	824	9.407 5944	878	0.592 4056	9.986 2556	54	40	
	30	9.393 9324	823	9.407 6822	877	0.592 3178	9.986 2502	54	30	
	40	9.394 0147	824	9.407 7699	877	0.592 2301	9.986 2448	54	20	
	50	9.394 0971	823	9.407 8576	877	0.592 1424	9.986 2394	54	10	
21	0	9.394 1794	823	9.407 9453	877	0.592 0547	9.986 2340	53	0	39
	10	9.394 2617	822	9.408 0330	877	0.591 9670	9.986 2287	54	50	
	20	9.394 3439	823	9.408 1207	876	0.591 8793	9.986 2233	54	40	
	30	9.394 4262	822	9.408 2083	876	0.591 7917	9.986 2179	54	30	
	40	9.394 5084	823	9.408 2959	877	0.591 7041	9.986 2125	54	20	
	50	9.394 5907	822	9.408 3836	876	0.591 6164	9.986 2071	54	10	
22	0	9.394 6729	822	9.408 4712	876	0.591 5288	9.986 2017	54	0	38
	10	9.394 7551	822	9.408 5588	875	0.591 4412	9.986 1963	54	50	
	20	9.394 8373	821	9.408 6463	876	0.591 3537	9.986 1909	54	40	
	30	9.394 9194	822	9.408 7339	875	0.591 2661	9.986 1855	54	30	
	40	9.395 0016	821	9.408 8214	876	0.591 1786	9.986 1801	54	20	
	50	9.395 0837	821	9.408 9090	875	0.591 0910	9.986 1747	54	10	
23	0	9.395 1658	821	9.408 9965	875	0.591 0035	9.986 1693	54	0	37
	10	9.395 2479	821	9.409 0840	874	0.590 9160	9.986 1639	54	50	
	20	9.395 3300	820	9.409 1714	875	0.590 8286	9.986 1585	54	40	
	30	9.395 4120	821	9.409 2589	875	0.590 7411	9.986 1531	54	30	
	40	9.395 4941	820	9.409 3464	874	0.590 6536	9.986 1477	54	20	
	50	9.395 5761	820	9.409 4338	874	0.590 5662	9.986 1423	54	10	
24	0	9.395 6581	820	9.409 5212	874	0.590 4788	9.986 1369	54	0	36
	10	9.395 7401	820	9.409 6086	874	0.590 3914	9.986 1315	54	50	
	20	9.395 8221	820	9.409 6960	874	0.590 3040	9.986 1261	54	40	
	30	9.395 9041	819	9.409 7834	873	0.590 2166	9.986 1207	54	30	
	40	9.395 9860	819	9.409 8707	874	0.590 1293	9.986 1153	54	20	
	50	9.396 0679	820	9.409 9581	873	0.590 0419	9.986 1099	54	10	
25	0	9.396 1499	819	9.410 0454	873	0.589 9546	9.986 1045	55	0	35
	10	9.396 2318	818	9.410 1327	873	0.589 8673	9.986 0990	54	50	
	20	9.396 3136	819	9.410 2200	873	0.589 7800	9.986 0936	54	40	
	30	9.396 3955	818	9.410 3073	872	0.589 6927	9.986 0882	54	30	
	40	9.396 4773	819	9.410 3945	873	0.589 6055	9.986 0828	54	20	
	50	9.396 5592	818	9.410 4818	872	0.589 5182	9.986 0774	54	10	
26	0	9.396 6410	818	9.410 5690	872	0.589 4310	9.986 0720	55	0	34
	10	9.396 7228	818	9.410 6562	873	0.589 3438	9.986 0665	54	50	
	20	9.396 8046	817	9.410 7435	871	0.589 2565	9.986 0611	54	40	
	30	9.396 8863	818	9.410 8306	872	0.589 1694	9.986 0557	54	30	
	40	9.396 9681	817	9.410 9178	872	0.589 0822	9.986 0503	54	20	
	50	9.397 0498	817	9.411 0050	871	0.588 9950	9.986 0449	55	10	
27	0	9.397 1315	817	9.411 0921	871	0.588 9079	9.986 0394	54	0	33
	10	9.397 2132	817	9.411 1792	871	0.588 8208	9.986 0340	54	50	
	20	9.397 2949	817	9.411 2663	871	0.588 7337	9.986 0286	55	40	
	30	9.397 3766	816	9.411 3534	871	0.588 6466	9.986 0231	54	30	
	40	9.397 4582	817	9.411 4405	871	0.588 5595	9.986 0177	54	20	
	50	9.397 5399	816	9.411 5276	870	0.588 4724	9.986 0123	54	10	
28	0	9.397 6215	816	9.411 6146	871	0.588 3854	9.986 0069	55	0	32
	10	9.397 7031	816	9.411 7017	870	0.588 2983	9.986 0014	54	50	
	20	9.397 7847	816	9.411 7887	870	0.588 2113	9.985 9960	54	40	
	30	9.397 8663	815	9.411 8757	870	0.588 1243	9.985 9906	55	30	
	40	9.397 9478	815	9.411 9627	870	0.588 0373	9.985 9851	54	20	
	50	9.398 0293	816	9.412 0497	869	0.587 9503	9.985 9797	55	10	
29	0	9.398 1109	815	9.412 1366	870	0.587 8634	9.985 9742	54	0	31
	10	9.398 1924	815	9.412 2236	869	0.587 7764	9.985 9688	54	50	
	20	9.398 2739	814	9.412 3105	869	0.587 6895	9.985 9634	55	40	
	30	9.398 3553	815	9.412 3974	869	0.587 6026	9.985 9579	54	30	
	40	9.398 4368	814	9.412 4843	869	0.587 5157	9.985 9525	55	20	
	50	9.398 5182	814	9.412 5712	869	0.587 4288	9.985 9470	54	10	
30	0	9.398 5996		9.412 6581		0.587 3419	9.985 9416		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

75°

14°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.398 5996	814	9.412 6581	868	0.587 3419	9.985 9416	55	0	30
	10	9.398 6810	814	9.412 7449	868	0.587 2551	9.985 9361	54	50	
	20	9.398 7624	814	9.412 8317	869	0.587 1683	9.985 9307	54	40	
	30	9.398 8438	814	9.412 9186	868	0.587 0814	9.985 9253	55	30	
	40	9.398 9252	813	9.413 0054	868	0.586 9946	9.985 9198	54	20	
	50	9.399 0065	813	9.413 0922	867	0.586 9078	9.985 9144	55	10	
31	0	9.399 0878	813	9.413 1789	868	0.586 8211	9.985 9089	55	0	29
	10	9.399 1691	813	9.413 2657	867	0.586 7343	9.985 9034	54	50	
	20	9.399 2504	813	9.413 3524	868	0.586 6476	9.985 8980	55	40	
	30	9.399 3317	813	9.413 4392	867	0.586 5608	9.985 8925	54	30	
	40	9.399 4130	812	9.413 5259	867	0.586 4741	9.985 8871	55	20	
	50	9.399 4942	812	9.413 6126	867	0.586 3874	9.985 8816	54	10	
32	0	9.399 5754	813	9.413 6993	866	0.586 3007	9.985 8762	55	0	28
	10	9.399 6567	812	9.413 7859	867	0.586 2141	9.985 8707	54	50	
	20	9.399 7379	811	9.413 8726	866	0.586 1274	9.985 8653	55	40	
	30	9.399 8190	812	9.413 9592	867	0.586 0408	9.985 8598	55	30	
	40	9.399 9002	811	9.414 0459	866	0.585 9541	9.985 8543	54	20	
	50	9.399 9813	812	9.414 1325	866	0.585 8675	9.985 8489	55	10	
33	0	9.400 0625	811	9.414 2191	865	0.585 7809	9.985 8434	55	0	27
	10	9.400 1436	811	9.414 3056	866	0.585 6944	9.985 8379	54	50	
	20	9.400 2247	811	9.414 3922	866	0.585 6078	9.985 8325	55	40	
	30	9.400 3058	810	9.414 4788	865	0.585 5212	9.985 8270	55	30	
	40	9.400 3868	811	9.414 5653	865	0.585 4347	9.985 8215	54	20	
	50	9.400 4679	810	9.414 6518	865	0.585 3482	9.985 8161	55	10	
34	0	9.400 5489	810	9.414 7383	865	0.585 2617	9.985 8106	55	0	26
	10	9.400 6299	810	9.414 8248	865	0.585 1752	9.985 8051	55	50	
	20	9.400 7109	810	9.414 9113	864	0.585 0887	9.985 7996	54	40	
	30	9.400 7919	810	9.414 9977	865	0.585 0023	9.985 7942	55	30	
	40	9.400 8729	809	9.415 0842	864	0.584 9158	9.985 7887	55	20	
	50	9.400 9538	810	9.415 1706	864	0.584 8294	9.985 7832	55	10	
35	0	9.401 0348	809	9.415 2570	864	0.584 7430	9.985 7777	54	0	25
	10	9.401 1157	809	9.415 3434	864	0.584 6566	9.985 7723	55	50	
	20	9.401 1966	809	9.415 4298	864	0.584 5702	9.985 7668	55	40	
	30	9.401 2775	809	9.415 5162	863	0.584 4838	9.985 7613	55	30	
	40	9.401 3584	808	9.415 6025	864	0.584 3975	9.985 7558	55	20	
	50	9.401 4392	809	9.415 6889	863	0.584 3111	9.985 7503	54	10	
36	0	9.401 5201	808	9.415 7752	863	0.584 2248	9.985 7449	55	0	24
	10	9.401 6009	808	9.415 8615	863	0.584 1385	9.985 7394	55	50	
	20	9.401 6817	808	9.415 9478	863	0.584 0522	9.985 7339	55	40	
	30	9.401 7625	808	9.416 0341	862	0.583 9659	9.985 7284	55	30	
	40	9.401 8433	807	9.416 1203	863	0.583 8797	9.985 7229	55	20	
	50	9.401 9240	808	9.416 2066	862	0.583 7934	9.985 7174	55	10	
37	0	9.402 0048	807	9.416 2928	862	0.583 7072	9.985 7119	55	0	23
	10	9.402 0855	807	9.416 3790	863	0.583 6210	9.985 7064	55	50	
	20	9.402 1662	807	9.416 4653	861	0.583 5347	9.985 7009	54	40	
	30	9.402 2469	807	9.416 5514	862	0.583 4486	9.985 6955	55	30	
	40	9.402 3276	806	9.416 6376	862	0.583 3624	9.985 6900	55	20	
	50	9.402 4082	807	9.416 7238	861	0.583 2762	9.985 6845	55	10	
38	0	9.402 4889	806	9.416 8099	862	0.583 1901	9.985 6790	55	0	22
	10	9.402 5695	806	9.416 8961	861	0.583 1039	9.985 6735	55	50	
	20	9.402 6501	806	9.416 9822	861	0.583 0178	9.985 6680	55	40	
	30	9.402 7307	806	9.417 0683	861	0.582 9317	9.985 6625	55	30	
	40	9.402 8113	806	9.417 1544	860	0.582 8456	9.985 6570	55	20	
	50	9.402 8919	805	9.417 2404	861	0.582 7596	9.985 6515	55	10	
39	0	9.402 9724	806	9.417 3265	860	0.582 6735	9.985 6460	55	0	21
	10	9.403 0530	805	9.417 4125	860	0.582 5875	9.985 6405	56	50	
	20	9.403 1335	805	9.417 4985	861	0.582 5015	9.985 6349	55	40	
	30	9.403 2140	805	9.417 5846	860	0.582 4154	9.985 6294	55	30	
	40	9.403 2945	805	9.417 6706	859	0.582 3294	9.985 6239	55	20	
	50	9.403 3750	804	9.417 7565	860	0.582 2435	9.985 6184	55	10	
40	0	9.403 4554		9.417 8425		0.582 1575	9.985 6129		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

75°

	865
1	86.5
2	173.0
3	259.5
4	346.0
5	432.5
6	519.0
7	605.5
8	692.0
9	778.5

	860
1	86.0
2	172.0
3	258.0
4	344.0
5	430.0
6	516.0
7	602.0
8	688.0
9	774.0

	815
1	81.5
2	163.0
3	244.5
4	326.0
5	407.5
6	489.0
7	570.5
8	652.0
9	733.5

	810
1	81.0
2	162.0
3	243.0
4	324.0
5	405.0
6	486.0
7	567.0
8	648.0
9	729.0

	805
1	80.5
2	161.0
3	241.5
4	322.0
5	402.5
6	483.0
7	563.5
8	644.0
9	724.5

	55
1	5.5
2	11.0
3	16.5
4	22.0
5	27.5
6	33.0
7	38.5
8	44.0
9	49.5

14°

860	
1	86.0
2	172.0
3	258.0
4	344.0
5	430.0
6	516.0
7	602.0
8	688.0
9	774.0

855	
1	85.5
2	171.0
3	256.5
4	342.0
5	427.5
6	513.0
7	598.5
8	684.0
9	769.5

850	
1	85.0
2	170.0
3	255.0
4	340.0
5	425.0
6	510.0
7	595.0
8	680.0
9	765.0

805	
1	80.5
2	161.0
3	241.5
4	322.0
5	402.5
6	483.0
7	563.5
8	644.0
9	724.5

800	
1	80.0
2	160.0
3	240.0
4	320.0
5	400.0
6	480.0
7	560.0
8	640.0
9	720.0

55	
1	5.5
2	11.0
3	16.5
4	22.0
5	27.5
6	33.0
7	38.5
8	44.0
9	49.5

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.403 4554	805	9.417 8425	859	0.582 1575	9.985 6129	55	0	20
	10	9.403 5359	804	9.417 9284	860	0.582 0716	9.985 6074	55	50	
	20	9.403 6163	804	9.418 0144	859	0.581 9856	9.985 6019	55	40	
	30	9.403 6967	804	9.418 1003	859	0.581 8997	9.985 5964	55	30	
	40	9.403 7771	804	9.418 1862	859	0.581 8138	9.985 5909	56	20	
	50	9.403 8575	803	9.418 2721	859	0.581 7279	9.985 5853	55	10	
41	0	9.403 9378	804	9.418 3580	858	0.581 6420	9.985 5798	55	0	19
	10	9.404 0182	803	9.418 4438	859	0.581 5562	9.985 5743	55	50	
	20	9.404 0985	803	9.418 5297	858	0.581 4703	9.985 5688	55	40	
	30	9.404 1788	803	9.418 6155	858	0.581 3845	9.985 5633	55	30	
	40	9.404 2591	803	9.418 7013	858	0.581 2987	9.985 5578	56	20	
	50	9.404 3394	802	9.418 7871	858	0.581 2129	9.985 5522	55	10	
42	0	9.404 4196	803	9.418 8729	858	0.581 1271	9.985 5467	55	0	18
	10	9.404 4999	802	9.418 9587	858	0.581 0413	9.985 5412	55	50	
	20	9.404 5801	802	9.419 0445	857	0.580 9555	9.985 5357	56	40	
	30	9.404 6603	803	9.419 1302	857	0.580 8698	9.985 5301	55	30	
	40	9.404 7406	801	9.419 2159	858	0.580 7841	9.985 5246	55	20	
	50	9.404 8207	802	9.419 3017	857	0.580 6983	9.985 5191	56	10	
43	0	9.404 9009	802	9.419 3874	856	0.580 6126	9.985 5135	55	0	17
	10	9.404 9811	801	9.419 4730	857	0.580 5270	9.985 5080	55	50	
	20	9.405 0612	801	9.419 5587	857	0.580 4413	9.985 5025	55	40	
	30	9.405 1413	801	9.419 6444	856	0.580 3556	9.985 4970	56	30	
	40	9.405 2214	801	9.419 7300	856	0.580 2700	9.985 4914	55	20	
	50	9.405 3015	801	9.419 8156	857	0.580 1844	9.985 4859	56	10	
44	0	9.405 3816	801	9.419 9013	856	0.580 0987	9.985 4803	55	0	16
	10	9.405 4617	800	9.419 9869	855	0.580 0131	9.985 4748	55	50	
	20	9.405 5417	800	9.420 0724	856	0.579 9276	9.985 4693	56	40	
	30	9.405 6217	800	9.420 1580	856	0.579 8420	9.985 4637	55	30	
	40	9.405 7017	800	9.420 2436	855	0.579 7564	9.985 4582	56	20	
	50	9.405 7817	800	9.420 3291	855	0.579 6709	9.985 4526	55	10	
45	0	9.405 8617	800	9.420 4146	855	0.579 5854	9.985 4471	55	0	15
	10	9.405 9417	799	9.420 5001	855	0.579 4999	9.985 4416	56	50	
	20	9.406 0216	800	9.420 5856	855	0.579 4144	9.985 4360	55	40	
	30	9.406 1016	799	9.420 6711	855	0.579 3289	9.985 4305	56	30	
	40	9.406 1815	799	9.420 7566	854	0.579 2434	9.985 4249	55	20	
	50	9.406 2614	799	9.420 8420	855	0.579 1580	9.985 4194	56	10	
46	0	9.406 3413	798	9.420 9275	854	0.579 0725	9.985 4138	55	0	14
	10	9.406 4211	799	9.421 0129	854	0.578 9871	9.985 4083	56	50	
	20	9.406 5010	798	9.421 0983	854	0.578 9017	9.985 4027	55	40	
	30	9.406 5808	799	9.421 1837	854	0.578 8163	9.985 3972	56	30	
	40	9.406 6607	798	9.421 2691	853	0.578 7309	9.985 3916	55	20	
	50	9.406 7405	798	9.421 3544	854	0.578 6456	9.985 3861	56	10	
47	0	9.406 8203	797	9.421 4398	853	0.578 5602	9.985 3805	56	0	13
	10	9.406 9000	798	9.421 5251	853	0.578 4749	9.985 3749	55	50	
	20	9.406 9798	798	9.421 6104	853	0.578 3896	9.985 3694	56	40	
	30	9.407 0596	797	9.421 6957	853	0.578 3043	9.985 3638	55	30	
	40	9.407 1393	797	9.421 7810	853	0.578 2190	9.985 3583	56	20	
	50	9.407 2190	797	9.421 8663	852	0.578 1337	9.985 3527	56	10	
48	0	9.407 2987	797	9.421 9515	853	0.578 0485	9.985 3471	55	0	12
	10	9.407 3784	796	9.422 0368	852	0.577 9632	9.985 3416	56	50	
	20	9.407 4580	797	9.422 1220	852	0.577 8780	9.985 3360	55	40	
	30	9.407 5377	796	9.422 2072	852	0.577 7928	9.985 3305	56	30	
	40	9.407 6173	797	9.422 2924	852	0.577 7076	9.985 3249	56	20	
	50	9.407 6970	796	9.422 3776	852	0.577 6224	9.985 3193	55	10	
49	0	9.407 7766	795	9.422 4628	852	0.577 5372	9.985 3138	56	0	11
	10	9.407 8561	796	9.422 5480	851	0.577 4520	9.985 3082	56	50	
	20	9.407 9357	796	9.422 6331	851	0.577 3669	9.985 3026	56	40	
	30	9.408 0153	795	9.422 7182	852	0.577 2818	9.985 2970	55	30	
	40	9.408 0948	795	9.422 8034	851	0.577 1966	9.985 2915	56	20	
	50	9.408 1743	796	9.422 8885	850	0.577 1115	9.985 2859	56	10	
50	0	9.408 2539		9.422 9735		0.577 0265	9.985 2803		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

75°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.408 2539	795	9.422 9735	851	0.577 0265	9.985 2803	56	0	10
	10	9.408 3334	794	9.423 0586	851	0.576 9414	9.985 2747	55	50	
	20	9.408 4128	795	9.423 1437	850	0.576 8563	9.985 2692	56	40	
	30	9.408 4923	794	9.423 2287	850	0.576 7713	9.985 2636	56	30	
	40	9.408 5717	795	9.423 3137	851	0.576 6863	9.985 2580	56	20	
	50	9.408 6512	794	9.423 3988	850	0.576 6012	9.985 2524	56	10	
51	0	9.408 7306	794	9.423 4838	849	0.576 5162	9.985 2468	55	0	9
	10	9.408 8100	794	9.423 5687	850	0.576 4313	9.985 2413	56	50	
	20	9.408 8894	794	9.423 6537	850	0.576 3463	9.985 2357	56	40	
	30	9.408 9688	793	9.423 7387	849	0.576 2613	9.985 2301	56	30	
	40	9.409 0481	794	9.423 8236	849	0.576 1764	9.985 2245	56	20	
	50	9.409 1275	793	9.423 9085	850	0.576 0915	9.985 2189	56	10	
52	0	9.409 2068	793	9.423 9935	849	0.576 0065	9.985 2133	56	0	8
	10	9.409 2861	793	9.424 0784	848	0.575 9216	9.985 2077	56	50	
	20	9.409 3654	793	9.424 1632	849	0.575 8368	9.985 2021	56	40	
	30	9.409 4447	792	9.424 2481	849	0.575 7519	9.985 1965	55	30	
	40	9.409 5239	793	9.424 3330	848	0.575 6670	9.985 1910	56	20	
	50	9.409 6032	792	9.424 4178	848	0.575 5822	9.985 1854	56	10	
53	0	9.409 6824	792	9.424 5026	848	0.575 4974	9.985 1798	56	0	7
	10	9.409 7616	792	9.424 5874	848	0.575 4126	9.985 1742	56	50	
	20	9.409 8408	792	9.424 6722	848	0.575 3278	9.985 1686	56	40	
	30	9.409 9200	792	9.424 7570	848	0.575 2430	9.985 1630	56	30	
	40	9.409 9992	791	9.424 8418	848	0.575 1582	9.985 1574	56	20	
	50	9.410 0783	792	9.424 9266	847	0.575 0734	9.985 1518	56	10	
54	0	9.410 1575	791	9.425 0113	847	0.574 9887	9.985 1462	56	0	6
	10	9.410 2366	791	9.425 0960	847	0.574 9040	9.985 1406	56	50	
	20	9.410 3157	791	9.425 1807	847	0.574 8193	9.985 1350	56	40	
	30	9.410 3948	791	9.425 2654	847	0.574 7346	9.985 1294	56	30	
	40	9.410 4739	790	9.425 3501	847	0.574 6499	9.985 1238	57	20	
	50	9.410 5529	791	9.425 4348	846	0.574 5652	9.985 1181	56	10	
55	0	9.410 6320	790	9.425 5194	847	0.574 4806	9.985 1125	56	0	5
	10	9.410 7110	790	9.425 6041	846	0.574 3959	9.985 1069	56	50	
	20	9.410 7900	790	9.425 6887	846	0.574 3113	9.985 1013	56	40	
	30	9.410 8690	790	9.425 7733	846	0.574 2267	9.985 0957	56	30	
	40	9.410 9480	790	9.425 8579	846	0.574 1421	9.985 0901	56	20	
	50	9.411 0270	789	9.425 9425	846	0.574 0575	9.985 0845	56	10	
56	0	9.411 1059	790	9.426 0271	845	0.573 9729	9.985 0789	57	0	4
	10	9.411 1849	789	9.426 1116	846	0.573 8884	9.985 0732	56	50	
	20	9.411 2638	789	9.426 1962	845	0.573 8038	9.985 0676	56	40	
	30	9.411 3427	789	9.426 2807	845	0.573 7193	9.985 0620	56	30	
	40	9.411 4216	789	9.426 3652	845	0.573 6348	9.985 0564	56	20	
	50	9.411 5005	788	9.426 4497	845	0.573 5503	9.985 0508	56	10	
57	0	9.411 5793	789	9.426 5342	845	0.573 4658	9.985 0452	57	0	3
	10	9.411 6582	788	9.426 6187	844	0.573 3813	9.985 0395	56	50	
	20	9.411 7370	788	9.426 7031	844	0.573 2969	9.985 0339	56	40	
	30	9.411 8158	788	9.426 7875	845	0.573 2125	9.985 0283	56	30	
	40	9.411 8946	788	9.426 8720	844	0.573 1280	9.985 0227	57	20	
	50	9.411 9734	788	9.426 9564	844	0.573 0436	9.985 0170	56	10	
58	0	9.412 0522	787	9.427 0408	844	0.572 9592	9.985 0114	56	0	2
	10	9.412 1309	788	9.427 1252	843	0.572 8748	9.985 0058	57	50	
	20	9.412 2097	787	9.427 2095	844	0.572 7905	9.985 0001	56	40	
	30	9.412 2884	787	9.427 2939	843	0.572 7061	9.984 9945	56	30	
	40	9.412 3671	787	9.427 3782	844	0.572 6218	9.984 9889	57	20	
	50	9.412 4458	787	9.427 4626	843	0.572 5374	9.984 9832	56	10	
59	0	9.412 5245	786	9.427 5469	843	0.572 4531	9.984 9776	56	0	1
	10	9.412 6031	787	9.427 6312	843	0.572 3688	9.984 9720	57	50	
	20	9.412 6818	786	9.427 7155	842	0.572 2845	9.984 9663	56	40	
	30	9.412 7604	786	9.427 7997	843	0.572 2003	9.984 9607	56	30	
	40	9.412 8390	786	9.427 8840	842	0.572 1160	9.984 9551	57	20	
	50	9.412 9176	786	9.427 9682	843	0.572 0318	9.984 9494	56	10	
60	0	9.412 9962		9.428 0525		0.571 9475	9.984 9438		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	845
1	84.5
2	169.0
3	253.5
4	338.0
5	422.5
6	507.0
7	591.5
8	676.0
9	760.5

	840
1	84.0
2	168.0
3	252.0
4	336.0
5	420.0
6	504.0
7	588.0
8	672.0
9	756.0

	795
1	79.5
2	159.0
3	238.5
4	318.0
5	397.5
6	477.0
7	556.5
8	636.0
9	715.5

	790
1	79.0
2	158.0
3	237.0
4	316.0
5	395.0
6	474.0
7	553.0
8	632.0
9	711.0

	785
1	78.5
2	157.0
3	235.5
4	314.0
5	392.5
6	471.0
7	549.5
8	628.0
9	706.5

	56
1	5.6
2	11.2
3	16.8
4	22.4
5	28.0
6	33.6
7	39.2
8	44.8
9	50.4

15°

	840	835	785	780	775	57
1	84.0	83.5	78.5	78.0	77.5	5.7
2	168.0	167.0	157.0	156.0	155.0	11.4
3	252.0	250.5	235.5	234.0	232.5	17.1
4	336.0	334.0	314.0	312.0	310.0	22.8
5	420.0	417.5	392.5	390.0	387.5	28.5
6	504.0	501.0	471.0	468.0	465.0	34.2
7	588.0	584.5	549.5	546.0	542.5	39.9
8	672.0	668.0	628.0	624.0	620.0	45.6
9	756.0	751.5	706.5	702.0	697.5	51.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.412 9962	786	9.428 0525	842	0.571 9475	9.984 9438	57	0	60
	10	9.413 0748	786	9.428 1367	842	0.571 8633	9.984 9381	56	50	
	20	9.413 1534	785	9.428 2209	842	0.571 7791	9.984 9325	57	40	
	30	9.413 2319	785	9.428 3051	841	0.571 6949	9.984 9268	56	30	
	40	9.413 3104	785	9.428 3892	842	0.571 6108	9.984 9212	56	20	
	50	9.413 3889	785	9.428 4734	841	0.571 5266	9.984 9156	57	10	
1	0	9.413 4674	785	9.428 5575	842	0.571 4425	9.984 9099	56	0	59
	10	9.413 5459	785	9.428 6417	841	0.571 3583	9.984 9043	57	50	
	20	9.413 6244	784	9.428 7258	841	0.571 2742	9.984 8986	56	40	
	30	9.413 7028	785	9.428 8099	841	0.571 1901	9.984 8930	57	30	
	40	9.413 7813	784	9.428 8940	840	0.571 1060	9.984 8873	56	20	
	50	9.413 8597	784	9.428 9780	841	0.571 0220	9.984 8817	57	10	
2	0	9.413 9381	784	9.429 0621	840	0.570 9379	9.984 8760	57	0	58
	10	9.414 0165	783	9.429 1461	841	0.570 8539	9.984 8703	56	50	
	20	9.414 0948	784	9.429 2302	840	0.570 7698	9.984 8647	57	40	
	30	9.414 1732	783	9.429 3142	840	0.570 6858	9.984 8590	56	30	
	40	9.414 2515	784	9.429 3982	840	0.570 6018	9.984 8534	57	20	
	50	9.414 3299	783	9.429 4822	839	0.570 5178	9.984 8477	57	10	
3	0	9.414 4082	783	9.429 5661	840	0.570 4339	9.984 8420	56	0	57
	10	9.414 4865	783	9.429 6501	839	0.570 3499	9.984 8364	57	50	
	20	9.414 5648	782	9.429 7340	840	0.570 2660	9.984 8307	56	40	
	30	9.414 6430	783	9.429 8180	839	0.570 1820	9.984 8251	57	30	
	40	9.414 7213	782	9.429 9019	839	0.570 0981	9.984 8194	57	20	
	50	9.414 7995	783	9.429 9858	839	0.570 0142	9.984 8137	56	10	
4	0	9.414 8778	782	9.430 0697	839	0.569 9303	9.984 8081	57	0	56
	10	9.414 9560	782	9.430 1536	838	0.569 8464	9.984 8024	57	50	
	20	9.415 0342	781	9.430 2374	839	0.569 7626	9.984 7967	56	40	
	30	9.415 1123	782	9.430 3213	838	0.569 6787	9.984 7911	57	30	
	40	9.415 1905	781	9.430 4051	838	0.569 5949	9.984 7854	57	20	
	50	9.415 2686	782	9.430 4889	838	0.569 5111	9.984 7797	57	10	
5	0	9.415 3468	781	9.430 5727	838	0.569 4273	9.984 7740	56	0	55
	10	9.415 4249	781	9.430 6565	838	0.569 3435	9.984 7684	57	50	
	20	9.415 5030	781	9.430 7403	838	0.569 2597	9.984 7627	57	40	
	30	9.415 5811	780	9.430 8241	837	0.569 1759	9.984 7570	57	30	
	40	9.415 6591	781	9.430 9078	838	0.569 0922	9.984 7513	57	20	
	50	9.415 7372	780	9.430 9916	837	0.569 0084	9.984 7456	56	10	
6	0	9.415 8152	781	9.431 0753	837	0.568 9247	9.984 7400	57	0	54
	10	9.415 8933	780	9.431 1590	837	0.568 8410	9.984 7343	57	50	
	20	9.415 9713	780	9.431 2427	837	0.568 7573	9.984 7286	57	40	
	30	9.416 0493	780	9.431 3264	836	0.568 6736	9.984 7229	57	30	
	40	9.416 1273	779	9.431 4100	837	0.568 5900	9.984 7172	57	20	
	50	9.416 2052	780	9.431 4937	836	0.568 5063	9.984 7115	56	10	
7	0	9.416 2832	779	9.431 5773	836	0.568 4227	9.984 7059	57	0	53
	10	9.416 3611	779	9.431 6609	837	0.568 3391	9.984 7002	57	50	
	20	9.416 4390	779	9.431 7446	835	0.568 2554	9.984 6945	57	40	
	30	9.416 5169	779	9.431 8281	836	0.568 1719	9.984 6888	57	30	
	40	9.416 5948	779	9.431 9117	836	0.568 0883	9.984 6831	57	20	
	50	9.416 6727	779	9.431 9953	836	0.568 0047	9.984 6774	57	10	
8	0	9.416 7506	778	9.432 0789	835	0.567 9211	9.984 6717	57	0	52
	10	9.416 8284	778	9.432 1624	835	0.567 8376	9.984 6660	57	50	
	20	9.416 9062	779	9.432 2459	835	0.567 7541	9.984 6603	57	40	
	30	9.416 9841	778	9.432 3294	835	0.567 6706	9.984 6546	57	30	
	40	9.417 0619	778	9.432 4129	835	0.567 5871	9.984 6489	57	20	
	50	9.417 1397	777	9.432 4964	835	0.567 5036	9.984 6432	57	10	
9	0	9.417 2174	778	9.432 5799	835	0.567 4201	9.984 6375	57	0	51
	10	9.417 2952	777	9.432 6634	834	0.567 3366	9.984 6318	57	50	
	20	9.417 3729	777	9.432 7468	834	0.567 2532	9.984 6261	57	40	
	30	9.417 4506	778	9.432 8302	834	0.567 1698	9.984 6204	57	30	
	40	9.417 5284	777	9.432 9136	834	0.567 0864	9.984 6147	57	20	
	50	9.417 6061	776	9.432 9970	834	0.567 0030	9.984 6090	57	10	
10	0	9.417 6837		9.433 0804		0.566 9196	9.984 6033		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

74°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.417 6837	777	9.433 0804	834	0.566 9196	9.984 6033	57	0	50
	10	9.417 7614	777	9.433 1638	834	0.566 8362	9.984 5976	57	50	
	20	9.417 8391	776	9.433 2472	833	0.566 7528	9.984 5919	57	40	
	30	9.417 9167	776	9.433 3305	834	0.566 6695	9.984 5862	57	30	
	40	9.417 9943	776	9.433 4139	833	0.566 5861	9.984 5805	57	20	
	50	9.418 0719	776	9.433 4972	833	0.566 5028	9.984 5748	58	10	
11	0	9.418 1495	776	9.433 5805	833	0.566 4195	9.984 5690	57	0	49
	10	9.418 2271	776	9.433 6638	833	0.566 3362	9.984 5633	57	50	
	20	9.418 3047	775	9.433 7471	832	0.566 2529	9.984 5576	57	40	
	30	9.418 3822	775	9.433 8303	833	0.566 1697	9.984 5519	57	30	
	40	9.418 4597	776	9.433 9136	832	0.566 0864	9.984 5462	57	20	
	50	9.418 5373	775	9.433 9968	832	0.566 0032	9.984 5405	58	10	
12	0	9.418 6148	775	9.434 0800	832	0.565 9200	9.984 5347	57	0	48
	10	9.418 6923	774	9.434 1632	832	0.565 8368	9.984 5290	57	50	
	20	9.418 7697	775	9.434 2464	832	0.565 7536	9.984 5233	57	40	
	30	9.418 8472	774	9.434 3296	832	0.565 6704	9.984 5176	58	30	
	40	9.418 9246	775	9.434 4128	831	0.565 5872	9.984 5118	57	20	
	50	9.419 0021	774	9.434 4959	832	0.565 5041	9.984 5061	57	10	
13	0	9.419 0795	774	9.434 5791	831	0.565 4209	9.984 5004	57	0	47
	10	9.419 1569	774	9.434 6622	831	0.565 3378	9.984 4947	58	50	
	20	9.419 2343	773	9.434 7453	831	0.565 2547	9.984 4889	57	40	
	30	9.419 3116	774	9.434 8284	831	0.565 1716	9.984 4832	57	30	
	40	9.419 3890	773	9.434 9115	831	0.565 0885	9.984 4775	58	20	
	50	9.419 4663	773	9.434 9946	830	0.565 0054	9.984 4717	57	10	
14	0	9.419 5436	774	9.435 0776	831	0.564 9224	9.984 4660	57	0	46
	10	9.419 6210	773	9.435 1607	830	0.564 8393	9.984 4603	58	50	
	20	9.419 6983	772	9.435 2437	830	0.564 7563	9.984 4545	57	40	
	30	9.419 7755	773	9.435 3267	830	0.564 6733	9.984 4488	57	30	
	40	9.419 8528	773	9.435 4097	830	0.564 5903	9.984 4431	58	20	
	50	9.419 9301	772	9.435 4927	830	0.564 5073	9.984 4373	57	10	
15	0	9.420 0073	772	9.435 5757	830	0.564 4243	9.984 4316	58	0	45
	10	9.420 0845	772	9.435 6587	829	0.564 3413	9.984 4258	57	50	
	20	9.420 1617	772	9.435 7416	829	0.564 2584	9.984 4201	57	40	
	30	9.420 2389	772	9.435 8245	830	0.564 1755	9.984 4144	58	30	
	40	9.420 3161	772	9.435 9075	829	0.564 0925	9.984 4086	57	20	
	50	9.420 3933	771	9.435 9904	829	0.564 0096	9.984 4029	58	10	
16	0	9.420 4704	771	9.436 0733	829	0.563 9267	9.984 3971	57	0	44
	10	9.420 5475	772	9.436 1562	828	0.563 8438	9.984 3914	58	50	
	20	9.420 6247	771	9.436 2390	829	0.563 7610	9.984 3856	57	40	
	30	9.420 7018	770	9.436 3219	828	0.563 6781	9.984 3799	58	30	
	40	9.420 7788	771	9.436 4047	828	0.563 5953	9.984 3741	57	20	
	50	9.420 8559	771	9.436 4875	829	0.563 5125	9.984 3684	58	10	
17	0	9.420 9330	770	9.436 5704	828	0.563 4296	9.984 3626	57	0	43
	10	9.421 0100	771	9.436 6532	827	0.563 3468	9.984 3569	58	50	
	20	9.421 0871	770	9.436 7359	828	0.563 2641	9.984 3511	57	40	
	30	9.421 1641	770	9.436 8187	828	0.563 1813	9.984 3454	58	30	
	40	9.421 2411	770	9.436 9015	827	0.563 0985	9.984 3396	58	20	
	50	9.421 3181	769	9.436 9842	828	0.563 0158	9.984 3338	57	10	
18	0	9.421 3950	770	9.437 0670	827	0.562 9330	9.984 3281	58	0	42
	10	9.421 4720	769	9.437 1497	827	0.562 8503	9.984 3223	57	50	
	20	9.421 5489	770	9.437 2324	827	0.562 7676	9.984 3166	58	40	
	30	9.421 6259	769	9.437 3151	826	0.562 6849	9.984 3108	58	30	
	40	9.421 7028	769	9.437 3977	827	0.562 6023	9.984 3050	57	20	
	50	9.421 7797	769	9.437 4804	827	0.562 5196	9.984 2993	58	10	
19	0	9.421 8566	768	9.437 5631	826	0.562 4369	9.984 2935	58	0	41
	10	9.421 9334	769	9.437 6457	826	0.562 3543	9.984 2877	57	50	
	20	9.422 0103	768	9.437 7283	826	0.562 2717	9.984 2820	58	40	
	30	9.422 0871	769	9.437 8109	826	0.562 1891	9.984 2762	58	30	
	40	9.422 1640	768	9.437 8935	826	0.562 1065	9.984 2704	57	20	
	50	9.422 2408	768	9.437 9761	826	0.562 0239	9.984 2647	58	10	
20	0	9.422 3176		9.438 0587		0.561 9413	9.984 2589		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

74°

	833
1	83.3
2	166.6
3	249.9
4	333.2
5	416.5
6	499.8
7	583.1
8	666.4
9	749.7

	830
1	83.0
2	166.0
3	249.0
4	332.0
5	415.0
6	498.0
7	581.0
8	664.0
9	747.0

	827
1	82.7
2	165.4
3	248.1
4	330.8
5	413.5
6	496.2
7	578.9
8	661.6
9	744.3

	775
1	77.5
2	155.0
3	232.5
4	310.0
5	387.5
6	465.0
7	542.5
8	620.0
9	697.5

	770
1	77.0
2	154.0
3	231.0
4	308.0
5	385.0
6	462.0
7	539.0
8	616.0
9	693.0

	58
1	5.8
2	11.6
3	17.4
4	23.2
5	29.0
6	34.8
7	40.6
8	46.4
9	52.2

15°

824	
1	82.4
2	164.8
3	247.2
4	329.6
5	412.0
6	494.4
7	576.8
8	659.2
9	741.6

821	
1	82.1
2	164.2
3	246.3
4	328.4
5	410.5
6	492.6
7	574.7
8	656.8
9	738.9

818	
1	81.8
2	163.6
3	245.4
4	327.2
5	409.0
6	490.8
7	572.6
8	654.4
9	736.2

767	
1	76.7
2	153.4
3	230.1
4	306.8
5	383.5
6	460.2
7	536.9
8	613.6
9	690.3

763	
1	76.3
2	152.6
3	228.9
4	305.2
5	381.5
6	457.8
7	534.1
8	610.4
9	686.7

58	
1	5.8
2	11.6
3	17.4
4	23.2
5	29.0
6	34.8
7	40.6
8	46.4
9	52.2

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.422 3176	767	9.438 0587	825	0.561 9413	9.984 2589	58	0	40
	10	9.422 3943	768	9.438 1412	826	0.561 8588	9.984 2531	58	50	
	20	9.422 4711	768	9.438 2238	825	0.561 7762	9.984 2473	57	40	
	30	9.422 5479	767	9.438 3063	825	0.561 6937	9.984 2416	58	30	
	40	9.422 6246	767	9.438 3888	825	0.561 6112	9.984 2358	58	20	
	50	9.422 7013	767	9.438 4713	825	0.561 5287	9.984 2300	58	10	
21	0	9.422 7780	767	9.438 5538	825	0.561 4462	9.984 2242	58	0	39
	10	9.422 8547	767	9.438 6363	824	0.561 3637	9.984 2184	57	50	
	20	9.422 9314	767	9.438 7187	825	0.561 2813	9.984 2127	58	40	
	30	9.423 0081	766	9.438 8012	824	0.561 1988	9.984 2069	58	30	
	40	9.423 0847	767	9.438 8836	824	0.561 1164	9.984 2011	58	20	
	50	9.423 1614	766	9.438 9660	825	0.561 0340	9.984 1953	58	10	
22	0	9.423 2380	766	9.439 0485	823	0.560 9515	9.984 1895	58	0	38
	10	9.423 3146	766	9.439 1308	824	0.560 8692	9.984 1837	57	50	
	20	9.423 3912	766	9.439 2132	824	0.560 7868	9.984 1780	58	40	
	30	9.423 4678	765	9.439 2956	823	0.560 7044	9.984 1722	58	30	
	40	9.423 5443	766	9.439 3779	824	0.560 6221	9.984 1664	58	20	
	50	9.423 6209	765	9.439 4603	823	0.560 5397	9.984 1606	58	10	
23	0	9.423 6974	765	9.439 5426	823	0.560 4574	9.984 1548	58	0	37
	10	9.423 7739	765	9.439 6249	823	0.560 3751	9.984 1490	58	50	
	20	9.423 8504	765	9.439 7072	823	0.560 2928	9.984 1432	58	40	
	30	9.423 9269	765	9.439 7895	823	0.560 2105	9.984 1374	58	30	
	40	9.424 0034	765	9.439 8718	823	0.560 1282	9.984 1316	58	20	
	50	9.424 0799	764	9.439 9541	822	0.560 0459	9.984 1258	58	10	
24	0	9.424 1563	764	9.440 0363	822	0.559 9637	9.984 1200	58	0	36
	10	9.424 2327	765	9.440 1185	823	0.559 8815	9.984 1142	58	50	
	20	9.424 3092	764	9.440 2008	822	0.559 7992	9.984 1084	58	40	
	30	9.424 3856	764	9.440 2830	822	0.559 7170	9.984 1026	58	30	
	40	9.424 4620	763	9.440 3652	821	0.559 6348	9.984 0968	58	20	
	50	9.424 5383	764	9.440 4473	822	0.559 5527	9.984 0910	58	10	
25	0	9.424 6147	763	9.440 5295	822	0.559 4705	9.984 0852	58	0	35
	10	9.424 6910	764	9.440 6117	821	0.559 3883	9.984 0794	58	50	
	20	9.424 7674	763	9.440 6938	821	0.559 3062	9.984 0736	58	40	
	30	9.424 8437	763	9.440 7759	821	0.559 2241	9.984 0678	58	30	
	40	9.424 9200	763	9.440 8580	821	0.559 1420	9.984 0620	58	20	
	50	9.424 9963	763	9.440 9401	821	0.559 0599	9.984 0562	59	10	
26	0	9.425 0726	762	9.441 0222	821	0.558 9778	9.984 0503	58	0	34
	10	9.425 1488	763	9.441 1043	820	0.558 8957	9.984 0445	58	50	
	20	9.425 2251	762	9.441 1863	821	0.558 8137	9.984 0387	58	40	
	30	9.425 3013	762	9.441 2684	820	0.558 7316	9.984 0329	58	30	
	40	9.425 3775	762	9.441 3504	820	0.558 6496	9.984 0271	58	20	
	50	9.425 4537	762	9.441 4324	821	0.558 5676	9.984 0213	59	10	
27	0	9.425 5299	762	9.441 5145	819	0.558 4855	9.984 0154	58	0	33
	10	9.425 6061	761	9.441 5964	820	0.558 4036	9.984 0096	58	50	
	20	9.425 6822	762	9.441 6784	820	0.558 3216	9.984 0038	58	40	
	30	9.425 7584	761	9.441 7604	819	0.558 2396	9.983 9980	58	30	
	40	9.425 8345	761	9.441 8423	820	0.558 1577	9.983 9922	59	20	
	50	9.425 9106	761	9.441 9243	819	0.558 0757	9.983 9863	58	10	
28	0	9.425 9867	761	9.442 0062	819	0.557 9938	9.983 9805	58	0	32
	10	9.426 0628	761	9.442 0881	819	0.557 9119	9.983 9747	58	50	
	20	9.426 1389	760	9.442 1700	819	0.557 8300	9.983 9689	59	40	
	30	9.426 2149	761	9.442 2519	819	0.557 7481	9.983 9630	58	30	
	40	9.426 2910	760	9.442 3338	819	0.557 6662	9.983 9572	58	20	
	50	9.426 3670	760	9.442 4157	818	0.557 5843	9.983 9514	59	10	
29	0	9.426 4430	760	9.442 4975	818	0.557 5025	9.983 9455	58	0	31
	10	9.426 5190	760	9.442 5793	819	0.557 4207	9.983 9397	58	50	
	20	9.426 5950	760	9.442 6612	818	0.557 3388	9.983 9339	59	40	
	30	9.426 6710	760	9.442 7430	818	0.557 2570	9.983 9280	58	30	
	40	9.426 7470	759	9.442 8248	817	0.557 1752	9.983 9222	58	20	
	50	9.426 8229	759	9.442 9065	818	0.557 0935	9.983 9164	59	10	
30	0	9.426 8988		9.442 9883		0.557 0117	9.983 9105		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

74°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.426 8988	759	9.442 9883	818	0.557 0117	9.983 9105	58	0	30
	10	9.426 9747	759	9.443 0701	817	0.556 9299	9.983 9047	59	50	
	20	9.427 0506	759	9.443 1518	817	0.556 8482	9.983 8988	58	40	
	30	9.427 1265	759	9.443 2335	817	0.556 7665	9.983 8930	58	30	
	40	9.427 2024	759	9.443 3152	818	0.556 6848	9.983 8872	59	20	
	50	9.427 2783	758	9.443 3970	816	0.556 6030	9.983 8813	58	10	
31	0	9.427 3541	758	9.443 4786	817	0.556 5214	9.983 8755	59	0	29
	10	9.427 4299	758	9.443 5603	817	0.556 4397	9.983 8696	58	50	
	20	9.427 5057	758	9.443 6420	816	0.556 3580	9.983 8638	59	40	
	30	9.427 5815	758	9.443 7236	817	0.556 2764	9.983 8579	58	30	
	40	9.427 6573	758	9.443 8053	816	0.556 1947	9.983 8521	59	20	
	50	9.427 7331	758	9.443 8869	816	0.556 1131	9.983 8462	58	10	
32	0	9.427 8089	757	9.443 9685	816	0.556 0315	9.983 8404	59	0	28
	10	9.427 8846	757	9.444 0501	816	0.555 9499	9.983 8345	58	50	
	20	9.427 9603	758	9.444 1317	816	0.555 8683	9.983 8287	59	40	
	30	9.428 0361	757	9.444 2133	815	0.555 7867	9.983 8228	59	30	
	40	9.428 1118	756	9.444 2948	816	0.555 7052	9.983 8169	58	20	
	50	9.428 1874	757	9.444 3764	815	0.555 6236	9.983 8111	59	10	
33	0	9.428 2631	757	9.444 4579	815	0.555 5421	9.983 8052	58	0	27
	10	9.428 3388	756	9.444 5394	815	0.555 4606	9.983 7994	59	50	
	20	9.428 4144	757	9.444 6209	815	0.555 3791	9.983 7935	58	40	
	30	9.428 4901	756	9.444 7024	815	0.555 2976	9.983 7877	59	30	
	40	9.428 5657	756	9.444 7839	814	0.555 2161	9.983 7818	59	20	
	50	9.428 6413	756	9.444 8653	815	0.555 1347	9.983 7759	58	10	
34	0	9.428 7169	755	9.444 9468	814	0.555 0532	9.983 7701	59	0	26
	10	9.428 7924	756	9.445 0282	815	0.554 9718	9.983 7642	59	50	
	20	9.428 8680	755	9.445 1097	814	0.554 8903	9.983 7583	58	40	
	30	9.428 9435	756	9.445 1911	814	0.554 8089	9.983 7525	59	30	
	40	9.429 0191	755	9.445 2725	814	0.554 7275	9.983 7466	59	20	
	50	9.429 0946	755	9.445 3539	813	0.554 6461	9.983 7407	59	10	
35	0	9.429 1701	755	9.445 4352	814	0.554 5648	9.983 7348	58	0	25
	10	9.429 2456	755	9.445 5166	814	0.554 4834	9.983 7290	59	50	
	20	9.429 3211	754	9.445 5980	813	0.554 4020	9.983 7231	59	40	
	30	9.429 3965	755	9.445 6793	813	0.554 3207	9.983 7172	58	30	
	40	9.429 4720	754	9.445 7606	813	0.554 2394	9.983 7114	59	20	
	50	9.429 5474	754	9.445 8419	813	0.554 1581	9.983 7055	59	10	
36	0	9.429 6228	754	9.445 9232	813	0.554 0768	9.983 6996	59	0	24
	10	9.429 6982	754	9.446 0045	813	0.553 9955	9.983 6937	59	50	
	20	9.429 7736	754	9.446 0858	812	0.553 9142	9.983 6878	58	40	
	30	9.429 8490	753	9.446 1670	813	0.553 8330	9.983 6820	59	30	
	40	9.429 9243	754	9.446 2483	812	0.553 7517	9.983 6761	59	20	
	50	9.429 9997	753	9.446 3295	812	0.553 6705	9.983 6702	59	10	
37	0	9.430 0750	753	9.446 4107	812	0.553 5893	9.983 6643	59	0	23
	10	9.430 1503	754	9.446 4919	812	0.553 5081	9.983 6584	59	50	
	20	9.430 2257	752	9.446 5731	812	0.553 4269	9.983 6525	59	40	
	30	9.430 3009	753	9.446 6543	812	0.553 3457	9.983 6466	58	30	
	40	9.430 3762	753	9.446 7355	811	0.553 2645	9.983 6408	59	20	
	50	9.430 4515	752	9.446 8166	812	0.553 1834	9.983 6349	59	10	
38	0	9.430 5267	753	9.446 8978	811	0.553 1022	9.983 6290	59	0	22
	10	9.430 6020	752	9.446 9789	811	0.553 0211	9.983 6231	59	50	
	20	9.430 6772	752	9.447 0600	811	0.552 9400	9.983 6172	59	40	
	30	9.430 7524	752	9.447 1411	811	0.552 8589	9.983 6113	59	30	
	40	9.430 8276	752	9.447 2222	811	0.552 7778	9.983 6054	59	20	
	50	9.430 9028	751	9.447 3033	810	0.552 6967	9.983 5995	59	10	
39	0	9.430 9779	752	9.447 3843	811	0.552 6157	9.983 5936	59	0	21
	10	9.431 0531	751	9.447 4654	810	0.552 5346	9.983 5877	59	50	
	20	9.431 1282	751	9.447 5464	810	0.552 4536	9.983 5818	59	40	
	30	9.431 2033	752	9.447 6274	811	0.552 3726	9.983 5759	59	30	
	40	9.431 2785	750	9.447 7085	810	0.552 2915	9.983 5700	59	20	
	50	9.431 3535	751	9.447 7895	809	0.552 2105	9.983 5641	59	10	
40	0	9.431 4286		9.447 8704		0.552 1296	9.983 5582		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	815
1	81.5
2	163.0
3	244.5
4	326.0
5	407.5
6	489.0
7	570.5
8	652.0
9	733.5

	812
1	81.2
2	162.4
3	243.6
4	324.8
5	406.0
6	487.2
7	568.4
8	649.6
9	730.8

	759
1	75.9
2	151.8
3	227.7
4	303.6
5	379.5
6	455.4
7	531.3
8	607.2
9	683.1

	755
1	75.5
2	151.0
3	226.5
4	302.0
5	377.5
6	453.0
7	528.5
8	604.0
9	679.5

	751
1	75.1
2	150.2
3	225.3
4	300.4
5	375.5
6	450.6
7	525.7
8	600.8
9	675.9

	59
1	5.9
2	11.8
3	17.7
4	23.6
5	29.5
6	35.4
7	41.3
8	47.2
9	53.1

15°

808	
1	80.8
2	161.6
3	242.4
4	323.2
5	404.0
6	484.8
7	565.6
8	646.4
9	727.2

805	
1	80.5
2	161.0
3	241.5
4	322.0
5	402.5
6	483.0
7	563.5
8	644.0
9	724.5

802	
1	80.2
2	160.4
3	240.6
4	320.8
5	401.0
6	481.2
7	561.4
8	641.6
9	721.8

749	
1	74.9
2	149.8
3	224.7
4	299.6
5	374.5
6	449.4
7	524.3
8	599.2
9	674.1

745	
1	74.5
2	149.0
3	223.5
4	298.0
5	372.5
6	447.0
7	521.5
8	596.0
9	670.5

59	
1	5.9
2	11.8
3	17.7
4	23.6
5	29.5
6	35.4
7	41.3
8	47.2
9	53.1

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.431 4286	751	9.447 8704	810	0.552 1296	9.983 5582	59	0	20
	10	9.431 5037	750	9.447 9514	810	0.552 0486	9.983 5523	59	50	
	20	9.431 5787	751	9.448 0324	809	0.551 9676	9.983 5464	59	40	
	30	9.431 6538	750	9.448 1133	810	0.551 8867	9.983 5405	59	30	
	40	9.431 7288	750	9.448 1943	809	0.551 8057	9.983 5346	60	20	
	50	9.431 8038	750	9.448 2752	809	0.551 7248	9.983 5286	59	10	
41	0	9.431 8788	750	9.448 3561	809	0.551 6439	9.983 5227	59	0	19
	10	9.431 9538	750	9.448 4370	809	0.551 5630	9.983 5168	59	50	
	20	9.432 0288	749	9.448 5179	808	0.551 4821	9.983 5109	59	40	
	30	9.432 1037	750	9.448 5987	809	0.551 4013	9.983 5050	59	30	
	40	9.432 1787	749	9.448 6796	808	0.551 3204	9.983 4991	59	20	
	50	9.432 2536	749	9.448 7604	809	0.551 2396	9.983 4932	60	10	
42	0	9.432 3285	749	9.448 8413	808	0.551 1587	9.983 4872	59	0	18
	10	9.432 4034	749	9.448 9221	808	0.551 0779	9.983 4813	59	50	
	20	9.432 4783	749	9.449 0029	808	0.550 9971	9.983 4754	59	40	
	30	9.432 5532	748	9.449 0837	808	0.550 9163	9.983 4695	59	30	
	40	9.432 6280	749	9.449 1645	807	0.550 8355	9.983 4636	60	20	
	50	9.432 7029	748	9.449 2452	808	0.550 7548	9.983 4576	59	10	
43	0	9.432 7777	748	9.449 3260	807	0.550 6740	9.983 4517	59	0	17
	10	9.432 8525	748	9.449 4067	807	0.550 5933	9.983 4458	59	50	
	20	9.432 9273	748	9.449 4874	808	0.550 5126	9.983 4399	60	40	
	30	9.433 0021	748	9.449 5682	807	0.550 4318	9.983 4339	59	30	
	40	9.433 0769	747	9.449 6489	807	0.550 3511	9.983 4280	59	20	
	50	9.433 1516	748	9.449 7296	806	0.550 2704	9.983 4221	60	10	
44	0	9.433 2264	747	9.449 8102	807	0.550 1898	9.983 4161	59	0	16
	10	9.433 3011	747	9.449 8909	806	0.550 1091	9.983 4102	59	50	
	20	9.433 3758	747	9.449 9715	807	0.550 0285	9.983 4043	60	40	
	30	9.433 4505	747	9.450 0522	806	0.549 9478	9.983 3983	59	30	
	40	9.433 5252	747	9.450 1328	806	0.549 8672	9.983 3924	59	20	
	50	9.433 5999	747	9.450 2134	806	0.549 7866	9.983 3865	60	10	
45	0	9.433 6746	746	9.450 2940	806	0.549 7060	9.983 3805	59	0	15
	10	9.433 7492	747	9.450 3746	806	0.549 6254	9.983 3746	59	50	
	20	9.433 8239	746	9.450 4552	806	0.549 5448	9.983 3687	60	40	
	30	9.433 8985	746	9.450 5358	805	0.549 4642	9.983 3627	59	30	
	40	9.433 9731	746	9.450 6163	805	0.549 3837	9.983 3568	60	20	
	50	9.434 0477	746	9.450 6968	806	0.549 3032	9.983 3508	59	10	
46	0	9.434 1223	745	9.450 7774	805	0.549 2226	9.983 3449	60	0	14
	10	9.434 1968	746	9.450 8579	805	0.549 1421	9.983 3389	59	50	
	20	9.434 2714	745	9.450 9384	805	0.549 0616	9.983 3330	59	40	
	30	9.434 3459	745	9.451 0189	804	0.548 9811	9.983 3271	60	30	
	40	9.434 4204	745	9.451 0993	805	0.548 9007	9.983 3211	59	20	
	50	9.434 4949	745	9.451 1798	804	0.548 8202	9.983 3152	60	10	
47	0	9.434 5694	745	9.451 2602	805	0.548 7398	9.983 3092	59	0	13
	10	9.434 6439	745	9.451 3407	804	0.548 6593	9.983 3033	60	50	
	20	9.434 7184	745	9.451 4211	804	0.548 5789	9.983 2973	60	40	
	30	9.434 7929	744	9.451 5015	804	0.548 4985	9.983 2913	59	30	
	40	9.434 8673	744	9.451 5819	804	0.548 4181	9.983 2854	60	20	
	50	9.434 9417	744	9.451 6623	804	0.548 3377	9.983 2794	59	10	
48	0	9.435 0161	744	9.451 7427	803	0.548 2573	9.983 2735	60	0	12
	10	9.435 0905	744	9.451 8230	804	0.548 1770	9.983 2675	59	50	
	20	9.435 1649	744	9.451 9034	803	0.548 0966	9.983 2616	60	40	
	30	9.435 2393	744	9.451 9837	803	0.548 0163	9.983 2556	60	30	
	40	9.435 3137	743	9.452 0640	803	0.547 9360	9.983 2496	59	20	
	50	9.435 3880	743	9.452 1443	803	0.547 8557	9.983 2437	60	10	
49	0	9.435 4623	744	9.452 2246	803	0.547 7754	9.983 2377	60	0	11
	10	9.435 5367	743	9.452 3049	803	0.547 6951	9.983 2317	59	50	
	20	9.435 6110	742	9.452 3852	802	0.547 6148	9.983 2258	60	40	
	30	9.435 6852	743	9.452 4654	803	0.547 5346	9.983 2198	60	30	
	40	9.435 7595	743	9.452 5457	802	0.547 4543	9.983 2138	59	20	
	50	9.435 8338	742	9.452 6259	802	0.547 3741	9.983 2079	60	10	
50	0	9.435 9080		9.452 7061		0.547 2939	9.983 2019		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

74°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.435 9080	743	9.452 7061	802	0.547 2939	9.983 2019	60	0	10
	10	9.435 9823	742	9.452 7863	802	0.547 2137	9.983 1959	59	50	
	20	9.436 0565	742	9.452 8665	802	0.547 1335	9.983 1900	60	40	
	30	9.436 1307	742	9.452 9467	802	0.547 0533	9.983 1840	60	30	
	40	9.436 2049	742	9.453 0269	801	0.546 9731	9.983 1780	60	20	
	50	9.436 2791	741	9.453 1070	802	0.546 8930	9.983 1720	59	10	
51	0	9.436 3532	742	9.453 1872	801	0.546 8128	9.983 1661	60	0	9
	10	9.436 4274	741	9.453 2673	801	0.546 7327	9.983 1601	60	50	
	20	9.436 5015	742	9.453 3474	802	0.546 6526	9.983 1541	60	40	
	30	9.436 5757	741	9.453 4276	800	0.546 5724	9.983 1481	60	30	
	40	9.436 6498	741	9.453 5076	801	0.546 4924	9.983 1421	60	20	
	50	9.436 7239	741	9.453 5877	801	0.546 4123	9.983 1361	59	10	
52	0	9.436 7980	740	9.453 6678	801	0.546 3322	9.983 1302	60	0	8
	10	9.436 8720	741	9.453 7479	800	0.546 2521	9.983 1242	60	50	
	20	9.436 9461	740	9.453 8279	800	0.546 1721	9.983 1182	60	40	
	30	9.437 0201	741	9.453 9079	800	0.546 0921	9.983 1122	60	30	
	40	9.437 0942	740	9.453 9879	801	0.546 0121	9.983 1062	60	20	
	50	9.437 1682	740	9.454 0680	799	0.545 9320	9.983 1002	60	10	
53	0	9.437 2422	740	9.454 1479	800	0.545 8521	9.983 0942	60	0	7
	10	9.437 3162	740	9.454 2279	800	0.545 7721	9.983 0882	59	50	
	20	9.437 3902	739	9.454 3079	800	0.545 6921	9.983 0823	60	40	
	30	9.437 4641	740	9.454 3879	799	0.545 6121	9.983 0763	60	30	
	40	9.437 5381	739	9.454 4678	799	0.545 5322	9.983 0703	60	20	
	50	9.437 6120	739	9.454 5477	799	0.545 4523	9.983 0643	60	10	
54	0	9.437 6859	739	9.454 6276	800	0.545 3724	9.983 0583	60	0	6
	10	9.437 7598	739	9.454 7076	798	0.545 2924	9.983 0523	60	50	
	20	9.437 8337	739	9.454 7874	799	0.545 2126	9.983 0463	60	40	
	30	9.437 9076	739	9.454 8673	799	0.545 1327	9.983 0403	60	30	
	40	9.437 9815	738	9.454 9472	799	0.545 0528	9.983 0343	60	20	
	50	9.438 0553	739	9.455 0271	798	0.544 9729	9.983 0283	60	10	
55	0	9.438 1292	738	9.455 1069	798	0.544 8931	9.983 0223	60	0	5
	10	9.438 2030	738	9.455 1867	798	0.544 8133	9.983 0163	60	50	
	20	9.438 2768	738	9.455 2665	799	0.544 7335	9.983 0103	61	40	
	30	9.438 3506	738	9.455 3464	797	0.544 6536	9.983 0042	60	30	
	40	9.438 4244	738	9.455 4261	798	0.544 5739	9.982 9982	60	20	
	50	9.438 4982	737	9.455 5059	798	0.544 4941	9.982 9922	60	10	
56	0	9.438 5719	738	9.455 5857	798	0.544 4143	9.982 9862	60	0	4
	10	9.438 6457	737	9.455 6655	797	0.544 3345	9.982 9802	60	50	
	20	9.438 7194	737	9.455 7452	797	0.544 2548	9.982 9742	60	40	
	30	9.438 7931	737	9.455 8249	798	0.544 1751	9.982 9682	60	30	
	40	9.438 8668	737	9.455 9047	797	0.544 0953	9.982 9622	61	20	
	50	9.438 9405	737	9.455 9844	797	0.544 0156	9.982 9561	60	10	
57	0	9.439 0142	737	9.456 0641	796	0.543 9359	9.982 9501	60	0	3
	10	9.439 0879	736	9.456 1437	797	0.543 8563	9.982 9441	60	50	
	20	9.439 1615	736	9.456 2234	797	0.543 7766	9.982 9381	60	40	
	30	9.439 2351	737	9.456 3031	796	0.543 6969	9.982 9321	60	30	
	40	9.439 3088	736	9.456 3827	796	0.543 6173	9.982 9261	61	20	
	50	9.439 3824	736	9.456 4623	797	0.543 5377	9.982 9200	60	10	
58	0	9.439 4560	736	9.456 5420	796	0.543 4580	9.982 9140	60	0	2
	10	9.439 5296	735	9.456 6216	796	0.543 3784	9.982 9080	60	50	
	20	9.439 6031	736	9.456 7012	795	0.543 2988	9.982 9020	61	40	
	30	9.439 6767	735	9.456 7807	796	0.543 2193	9.982 8959	60	30	
	40	9.439 7502	735	9.456 8603	796	0.543 1397	9.982 8899	60	20	
	50	9.439 8237	736	9.456 9399	795	0.543 0601	9.982 8839	61	10	
59	0	9.439 8973	735	9.457 0194	796	0.542 9806	9.982 8778	60	0	1
	10	9.439 9708	735	9.457 0990	795	0.542 9010	9.982 8718	60	50	
	20	9.440 0443	734	9.457 1785	795	0.542 8215	9.982 8658	61	40	
	30	9.440 1177	735	9.457 2580	795	0.542 7420	9.982 8597	60	30	
	40	9.440 1912	734	9.457 3375	795	0.542 6625	9.982 8537	60	20	
	50	9.440 2646	735	9.457 4170	794	0.542 5830	9.982 8477	61	10	
60	0	9.440 3381		9.457 4964		0.542 5036	9.982 8416		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	799
1	79.9
2	159.8
3	239.7
4	319.6
5	399.5
6	479.4
7	559.3
8	639.2
9	719.1

	796
1	79.6
2	159.2
3	238.8
4	318.4
5	398.0
6	477.6
7	557.2
8	636.8
9	716.4

	742
1	74.2
2	148.4
3	222.6
4	296.8
5	371.0
6	445.2
7	519.4
8	593.6
9	667.8

	739
1	73.9
2	147.8
3	221.7
4	295.6
5	369.5
6	443.4
7	517.3
8	591.2
9	665.1

	736
1	73.6
2	147.2
3	220.8
4	294.4
5	368.0
6	441.6
7	515.2
8	588.8
9	662.4

	60
1	6.0
2	12.0
3	18.0
4	24.0
5	30.0
6	36.0
7	42.0
8	48.0
9	54.0

16°

793	
1	79.3
2	158.6
3	237.9
4	317.2
5	396.5
6	475.8
7	555.1
8	634.4
9	713.7

790	
1	79.0
2	158.0
3	237.0
4	316.0
5	395.0
6	474.0
7	553.0
8	632.0
9	711.0

787	
1	78.7
2	157.4
3	236.1
4	314.8
5	393.5
6	472.2
7	550.9
8	629.6
9	708.3

733	
1	73.3
2	146.6
3	219.9
4	293.2
5	366.5
6	439.8
7	513.1
8	586.4
9	659.7

729	
1	72.9
2	145.8
3	218.7
4	291.6
5	364.5
6	437.4
7	510.3
8	583.2
9	656.1

61	
1	6.1
2	12.2
3	18.3
4	24.4
5	30.5
6	36.6
7	42.7
8	48.8
9	54.9

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.440 3381	734	9.457 4964	795	0.542 5036	9.982 8416	60	0	60
	10	9.440 4115	734	9.457 5759	794	0.542 4241	9.982 8356	60	50	
	20	9.440 4849	734	9.457 6553	795	0.542 3447	9.982 8296	61	40	
	30	9.440 5583	734	9.457 7348	794	0.542 2652	9.982 8235	60	30	
	40	9.440 6317	733	9.457 8142	794	0.542 1858	9.982 8175	61	20	
	50	9.440 7050	734	9.457 8936	794	0.542 1064	9.982 8114	60	10	
1	0	9.440 7784	733	9.457 9730	794	0.542 0270	9.982 8054	61	0	59
	10	9.440 8517	734	9.458 0524	794	0.541 9476	9.982 7993	60	50	
	20	9.440 9251	733	9.458 1318	793	0.541 8682	9.982 7933	60	40	
	30	9.440 9984	733	9.458 2111	794	0.541 7889	9.982 7873	61	30	
	40	9.441 0717	733	9.458 2905	793	0.541 7095	9.982 7812	60	20	
	50	9.441 1450	732	9.458 3698	793	0.541 6302	9.982 7752	61	10	
2	0	9.441 2182	733	9.458 4491	794	0.541 5509	9.982 7691	60	0	58
	10	9.441 2915	733	9.458 5285	793	0.541 4715	9.982 7631	61	50	
	20	9.441 3648	732	9.458 6078	792	0.541 3922	9.982 7570	60	40	
	30	9.441 4380	732	9.458 6870	793	0.541 3130	9.982 7510	61	30	
	40	9.441 5112	732	9.458 7663	793	0.541 2337	9.982 7449	61	20	
	50	9.441 5844	732	9.458 8456	792	0.541 1544	9.982 7388	60	10	
3	0	9.441 6576	732	9.458 9248	793	0.541 0752	9.982 7328	61	0	57
	10	9.441 7308	732	9.459 0041	792	0.540 9959	9.982 7267	60	50	
	20	9.441 8040	731	9.459 0833	792	0.540 9167	9.982 7207	61	40	
	30	9.441 8771	732	9.459 1625	792	0.540 8375	9.982 7146	61	30	
	40	9.441 9503	731	9.459 2417	792	0.540 7583	9.982 7085	60	20	
	50	9.442 0234	731	9.459 3209	792	0.540 6791	9.982 7025	61	10	
4	0	9.442 0965	731	9.459 4001	791	0.540 5999	9.982 6964	60	0	56
	10	9.442 1696	731	9.459 4792	792	0.540 5208	9.982 6904	61	50	
	20	9.442 2427	731	9.459 5584	791	0.540 4416	9.982 6843	61	40	
	30	9.442 3158	730	9.459 6375	792	0.540 3625	9.982 6782	60	30	
	40	9.442 3888	731	9.459 7167	791	0.540 2833	9.982 6722	61	20	
	50	9.442 4619	730	9.459 7958	791	0.540 2042	9.982 6661	61	10	
5	0	9.442 5349	730	9.459 8749	791	0.540 1251	9.982 6600	61	0	55
	10	9.442 6079	730	9.459 9540	791	0.540 0460	9.982 6539	60	50	
	20	9.442 6809	730	9.460 0331	790	0.539 9669	9.982 6479	61	40	
	30	9.442 7539	730	9.460 1121	791	0.539 8879	9.982 6418	61	30	
	40	9.442 8269	730	9.460 1912	790	0.539 8088	9.982 6357	61	20	
	50	9.442 8999	729	9.460 2702	790	0.539 7298	9.982 6296	60	10	
6	0	9.442 9728	730	9.460 3492	791	0.539 6508	9.982 6236	61	0	54
	10	9.443 0458	729	9.460 4283	790	0.539 5717	9.982 6175	61	50	
	20	9.443 1187	729	9.460 5073	790	0.539 4927	9.982 6114	61	40	
	30	9.443 1916	729	9.460 5863	789	0.539 4137	9.982 6053	60	30	
	40	9.443 2645	729	9.460 6652	790	0.539 3348	9.982 5993	61	20	
	50	9.443 3374	729	9.460 7442	790	0.539 2558	9.982 5932	61	10	
7	0	9.443 4103	728	9.460 8232	789	0.539 1768	9.982 5871	61	0	53
	10	9.443 4831	729	9.460 9021	790	0.539 0979	9.982 5810	61	50	
	20	9.443 5560	728	9.460 9811	789	0.539 0189	9.982 5749	61	40	
	30	9.443 6288	728	9.461 0600	789	0.538 9400	9.982 5688	61	30	
	40	9.443 7016	728	9.461 1389	789	0.538 8611	9.982 5627	60	20	
	50	9.443 7744	728	9.461 2178	789	0.538 7822	9.982 5567	61	10	
8	0	9.443 8472	728	9.461 2967	788	0.538 7033	9.982 5506	61	0	52
	10	9.443 9200	728	9.461 3755	789	0.538 6245	9.982 5445	61	50	
	20	9.443 9928	727	9.461 4544	789	0.538 5456	9.982 5384	61	40	
	30	9.444 0655	728	9.461 5333	788	0.538 4667	9.982 5323	61	30	
	40	9.444 1383	727	9.461 6121	788	0.538 3879	9.982 5262	61	20	
	50	9.444 2110	727	9.461 6909	788	0.538 3091	9.982 5201	61	10	
9	0	9.444 2837	727	9.461 7697	788	0.538 2303	9.982 5140	61	0	51
	10	9.444 3564	727	9.461 8485	788	0.538 1515	9.982 5079	61	50	
	20	9.444 4291	727	9.461 9273	788	0.538 0727	9.982 5018	61	40	
	30	9.444 5018	727	9.462 0061	788	0.537 9939	9.982 4957	61	30	
	40	9.444 5745	726	9.462 0849	787	0.537 9151	9.982 4896	61	20	
	50	9.444 6471	726	9.462 1636	787	0.537 8364	9.982 4835	61	10	
10	0	9.444 7197		9.462 2423		0.537 7577	9.982 4774		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

73°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.444 7197	727	9.462 2423	788	0.537 7577	9.982 4774	61	0	50
	10	9.444 7924	726	9.462 3211	787	0.537 6789	9.982 4713	61	50	
	20	9.444 8650	726	9.462 3998	787	0.537 6002	9.982 4652	61	40	
	30	9.444 9376	726	9.462 4785	787	0.537 5215	9.982 4591	61	30	
	40	9.445 0102	725	9.462 5572	787	0.537 4428	9.982 4530	61	20	
	50	9.445 0827	726	9.462 6359	786	0.537 3641	9.982 4469	61	10	
11	0	9.445 1553	725	9.462 7145	787	0.537 2855	9.982 4408	62	0	49
	10	9.445 2278	726	9.462 7932	786	0.537 2068	9.982 4346	61	50	
	20	9.445 3004	725	9.462 8718	787	0.537 1282	9.982 4285	61	40	
	30	9.445 3729	725	9.462 9505	786	0.537 0495	9.982 4224	61	30	
	40	9.445 4454	725	9.463 0291	786	0.536 9709	9.982 4163	61	20	
	50	9.445 5179	725	9.463 1077	786	0.536 8923	9.982 4102	61	10	
12	0	9.445 5904	724	9.463 1863	786	0.536 8137	9.982 4041	61	0	48
	10	9.445 6628	725	9.463 2649	785	0.536 7351	9.982 3980	62	50	
	20	9.445 7353	724	9.463 3434	786	0.536 6566	9.982 3918	61	40	
	30	9.445 8077	724	9.463 4220	785	0.536 5780	9.982 3857	61	30	
	40	9.445 8801	725	9.463 5005	786	0.536 4995	9.982 3796	61	20	
	50	9.445 9526	724	9.463 5791	785	0.536 4209	9.982 3735	61	10	
13	0	9.446 0250	723	9.463 6576	785	0.536 3424	9.982 3674	62	0	47
	10	9.446 0973	724	9.463 7361	785	0.536 2639	9.982 3612	61	50	
	20	9.446 1697	724	9.463 8146	785	0.536 1854	9.982 3551	61	40	
	30	9.446 2421	723	9.463 8931	785	0.536 1069	9.982 3490	62	30	
	40	9.446 3144	724	9.463 9716	784	0.536 0284	9.982 3428	61	20	
	50	9.446 3868	723	9.464 0500	785	0.535 9500	9.982 3367	61	10	
14	0	9.446 4591	723	9.464 1285	784	0.535 8715	9.982 3306	61	0	46
	10	9.446 5314	723	9.464 2069	785	0.535 7931	9.982 3245	62	50	
	20	9.446 6037	723	9.464 2854	784	0.535 7146	9.982 3183	61	40	
	30	9.446 6760	722	9.464 3638	784	0.535 6362	9.982 3122	61	30	
	40	9.446 7482	723	9.464 4422	784	0.535 5578	9.982 3061	62	20	
	50	9.446 8205	722	9.464 5206	784	0.535 4794	9.982 2999	61	10	
15	0	9.446 8927	723	9.464 5990	783	0.535 4010	9.982 2938	62	0	45
	10	9.446 9650	722	9.464 6773	784	0.535 3227	9.982 2876	61	50	
	20	9.447 0372	722	9.464 7557	783	0.535 2443	9.982 2815	61	40	
	30	9.447 1094	722	9.464 8340	784	0.535 1660	9.982 2754	62	30	
	40	9.447 1816	722	9.464 9124	783	0.535 0876	9.982 2692	61	20	
	50	9.447 2538	721	9.464 9907	783	0.535 0093	9.982 2631	62	10	
16	0	9.447 3259	722	9.465 0690	783	0.534 9310	9.982 2569	61	0	44
	10	9.447 3981	721	9.465 1473	783	0.534 8527	9.982 2508	61	50	
	20	9.447 4702	721	9.465 2256	782	0.534 7744	9.982 2447	62	40	
	30	9.447 5423	722	9.465 3038	783	0.534 6962	9.982 2385	61	30	
	40	9.447 6145	721	9.465 3821	783	0.534 6179	9.982 2324	62	20	
	50	9.447 6866	720	9.465 4604	782	0.534 5396	9.982 2262	61	10	
17	0	9.447 7586	721	9.465 5386	782	0.534 4614	9.982 2201	62	0	43
	10	9.447 8307	721	9.465 6168	782	0.534 3832	9.982 2139	61	50	
	20	9.447 9028	720	9.465 6950	782	0.534 3050	9.982 2078	62	40	
	30	9.447 9748	721	9.465 7732	782	0.534 2268	9.982 2016	61	30	
	40	9.448 0469	720	9.465 8514	782	0.534 1486	9.982 1955	62	20	
	50	9.448 1189	720	9.465 9296	782	0.534 0704	9.982 1893	62	10	
18	0	9.448 1909	720	9.466 0078	781	0.533 9922	9.982 1831	61	0	42
	10	9.448 2629	720	9.466 0859	782	0.533 9141	9.982 1770	62	50	
	20	9.448 3349	720	9.466 1641	781	0.533 8359	9.982 1708	61	40	
	30	9.448 4069	719	9.466 2422	781	0.533 7578	9.982 1647	62	30	
	40	9.448 4788	720	9.466 3203	781	0.533 6797	9.982 1585	62	20	
	50	9.448 5508	719	9.466 3984	781	0.533 6016	9.982 1523	61	10	
19	0	9.448 6227	719	9.466 4765	781	0.533 5235	9.982 1462	62	0	41
	10	9.448 6946	719	9.466 5546	781	0.533 4454	9.982 1400	62	50	
	20	9.448 7665	719	9.466 6327	780	0.533 3673	9.982 1338	61	40	
	30	9.448 8384	719	9.466 7107	781	0.533 2893	9.982 1277	62	30	
	40	9.448 9103	719	9.466 7888	780	0.533 2112	9.982 1215	62	20	
	50	9.448 9822	718	9.466 8668	780	0.533 1332	9.982 1153	61	10	
20	0	9.449 0540		9.466 9448		0.533 0552	9.982 1092		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

784	
1	78.4
2	156.8
3	235.2
4	313.6
5	392.0
6	470.4
7	548.8
8	627.2
9	705.6

781	
1	78.1
2	156.2
3	234.3
4	312.4
5	390.5
6	468.6
7	546.7
8	624.8
9	702.9

725	
1	72.5
2	145.0
3	217.5
4	290.0
5	362.5
6	435.0
7	507.5
8	580.0
9	652.5

722	
1	72.2
2	144.4
3	216.6
4	288.8
5	361.0
6	433.2
7	505.4
8	577.6
9	649.8

719	
1	71.9
2	143.8
3	215.7
4	287.6
5	359.5
6	431.4
7	503.3
8	575.2
9	647.1

62	
1	6.2
2	12.4
3	18.6
4	24.8
5	31.0
6	37.2
7	43.4
8	49.6
9	55.8

16°

779	
1	77.9
2	155.8
3	233.7
4	311.6
5	389.5
6	467.4
7	545.3
8	623.2
9	701.1

776	
1	77.6
2	155.2
3	232.8
4	310.4
5	388.0
6	465.6
7	543.2
8	620.8
9	698.4

773	
1	77.3
2	154.6
3	231.9
4	309.2
5	386.5
6	463.8
7	541.1
8	618.4
9	695.7

717	
1	71.7
2	143.4
3	215.1
4	286.8
5	358.5
6	430.2
7	501.9
8	573.6
9	645.3

713	
1	71.3
2	142.6
3	213.9
4	285.2
5	356.5
6	427.8
7	499.1
8	570.4
9	641.7

62	
1	6.2
2	12.4
3	18.6
4	24.8
5	31.0
6	37.2
7	43.4
8	49.6
9	55.8

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.449 0540	718	9.466 9448	780	0.533 0552	9.982 1092	62	0	40
	10	9.449 1258	719	9.467 0228	780	0.532 9772	9.982 1030	62	50	
	20	9.449 1977	718	9.467 1008	780	0.532 8992	9.982 0968	61	40	
	30	9.449 2695	718	9.467 1788	780	0.532 8212	9.982 0907	62	30	
	40	9.449 3413	718	9.467 2568	780	0.532 7432	9.982 0845	62	20	
	50	9.449 4131	718	9.467 3348	779	0.532 6652	9.982 0783	62	10	
21	0	9.449 4849	717	9.467 4127	780	0.532 5873	9.982 0721	61	0	39
	10	9.449 5566	718	9.467 4907	779	0.532 5093	9.982 0660	62	50	
	20	9.449 6284	717	9.467 5686	779	0.532 4314	9.982 0598	62	40	
	30	9.449 7001	717	9.467 6465	779	0.532 3535	9.982 0536	62	30	
	40	9.449 7718	718	9.467 7244	779	0.532 2756	9.982 0474	62	20	
	50	9.449 8436	717	9.467 8023	779	0.532 1977	9.982 0412	61	10	
22	0	9.449 9153	716	9.467 8802	779	0.532 1198	9.982 0351	62	0	38
	10	9.449 9869	717	9.467 9581	778	0.532 0419	9.982 0289	62	50	
	20	9.450 0586	717	9.468 0359	779	0.531 9641	9.982 0227	62	40	
	30	9.450 1303	716	9.468 1138	778	0.531 8862	9.982 0165	62	30	
	40	9.450 2019	717	9.468 1916	778	0.531 8084	9.982 0103	62	20	
	50	9.450 2736	716	9.468 2694	779	0.531 7306	9.982 0041	62	10	
23	0	9.450 3452	716	9.468 3473	778	0.531 6527	9.981 9979	62	0	37
	10	9.450 4168	716	9.468 4251	777	0.531 5749	9.981 9917	62	50	
	20	9.450 4884	716	9.468 5028	778	0.531 4972	9.981 9855	61	40	
	30	9.450 5600	715	9.468 5806	778	0.531 4194	9.981 9794	62	30	
	40	9.450 6315	716	9.468 6584	777	0.531 3416	9.981 9732	62	20	
	50	9.450 7031	716	9.468 7361	778	0.531 2639	9.981 9670	62	10	
24	0	9.450 7747	715	9.468 8139	777	0.531 1861	9.981 9608	62	0	36
	10	9.450 8462	715	9.468 8916	777	0.531 1084	9.981 9546	62	50	
	20	9.450 9177	715	9.468 9693	777	0.531 0307	9.981 9484	62	40	
	30	9.450 9892	715	9.469 0470	777	0.530 9530	9.981 9422	62	30	
	40	9.451 0607	715	9.469 1247	777	0.530 8753	9.981 9360	62	20	
	50	9.451 1322	715	9.469 2024	777	0.530 7976	9.981 9298	62	10	
25	0	9.451 2037	714	9.469 2801	776	0.530 7199	9.981 9236	62	0	35
	10	9.451 2751	715	9.469 3577	777	0.530 6423	9.981 9174	62	50	
	20	9.451 3466	714	9.469 4354	776	0.530 5646	9.981 9112	62	40	
	30	9.451 4180	714	9.469 5130	777	0.530 4870	9.981 9050	63	30	
	40	9.451 4894	714	9.469 5907	776	0.530 4093	9.981 8987	62	20	
	50	9.451 5608	714	9.469 6683	776	0.530 3317	9.981 8925	62	10	
26	0	9.451 6322	714	9.469 7459	776	0.530 2541	9.981 8863	62	0	34
	10	9.451 7036	713	9.469 8235	775	0.530 1765	9.981 8801	62	50	
	20	9.451 7749	714	9.469 9010	776	0.530 0990	9.981 8739	62	40	
	30	9.451 8463	713	9.469 9786	776	0.530 0214	9.981 8677	62	30	
	40	9.451 9176	714	9.470 0562	775	0.529 9438	9.981 8615	62	20	
	50	9.451 9890	713	9.470 1337	775	0.529 8663	9.981 8553	63	10	
27	0	9.452 0603	713	9.470 2112	776	0.529 7888	9.981 8490	62	0	33
	10	9.452 1316	713	9.470 2888	775	0.529 7112	9.981 8428	62	50	
	20	9.452 2029	713	9.470 3663	775	0.529 6337	9.981 8366	62	40	
	30	9.452 2742	712	9.470 4438	775	0.529 5562	9.981 8304	62	30	
	40	9.452 3454	713	9.470 5213	774	0.529 4787	9.981 8242	63	20	
	50	9.452 4167	712	9.470 5987	775	0.529 4013	9.981 8179	62	10	
28	0	9.452 4879	712	9.470 6762	774	0.529 3238	9.981 8117	62	0	32
	10	9.452 5591	713	9.470 7536	775	0.529 2464	9.981 8055	62	50	
	20	9.452 6304	712	9.470 8311	774	0.529 1689	9.981 7993	62	40	
	30	9.452 7016	712	9.470 9085	774	0.529 0915	9.981 7931	63	30	
	40	9.452 7728	711	9.470 9859	774	0.529 0141	9.981 7868	62	20	
	50	9.452 8439	712	9.471 0633	774	0.528 9367	9.981 7806	62	10	
29	0	9.452 9151	711	9.471 1407	774	0.528 8593	9.981 7744	63	0	31
	10	9.452 9862	712	9.471 2181	774	0.528 7819	9.981 7681	62	50	
	20	9.453 0574	711	9.471 2955	773	0.528 7045	9.981 7619	62	40	
	30	9.453 1285	711	9.471 3728	774	0.528 6272	9.981 7557	63	30	
	40	9.453 1996	711	9.471 4502	773	0.528 5498	9.981 7494	62	20	
	50	9.453 2707	711	9.471 5275	773	0.528 4725	9.981 7432	62	10	
30	0	9.453 3418		9.471 6048		0.528 3952	9.981 7370		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

73°

16°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.453 3418	711	9.471 6048	774	0.528 3952	9.981 7370	63	0	30
	10	9.453 4129	710	9.471 6822	773	0.528 3178	9.981 7307	62	50	
	20	9.453 4839	711	9.471 7595	772	0.528 2405	9.981 7245	63	40	
	30	9.453 5550	710	9.471 8367	773	0.528 1633	9.981 7182	62	30	
	40	9.453 6260	711	9.471 9140	773	0.528 0860	9.981 7120	62	20	
	50	9.453 6971	710	9.471 9913	772	0.528 0087	9.981 7058	63	10	
31	0	9.453 7681	710	9.472 0685	773	0.527 9315	9.981 6995	62	0	29
	10	9.453 8391	709	9.472 1458	772	0.527 8542	9.981 6933	63	50	
	20	9.453 9100	710	9.472 2230	772	0.527 7770	9.981 6870	62	40	
	30	9.453 9810	710	9.472 3002	772	0.527 6998	9.981 6808	63	30	
	40	9.454 0520	709	9.472 3774	772	0.527 6226	9.981 6745	62	20	
	50	9.454 1229	710	9.472 4546	772	0.527 5454	9.981 6683	63	10	
32	0	9.454 1939	709	9.472 5318	772	0.527 4682	9.981 6620	62	0	28
	10	9.454 2648	709	9.472 6090	772	0.527 3910	9.981 6558	63	50	
	20	9.454 3357	709	9.472 6862	771	0.527 3138	9.981 6495	62	40	
	30	9.454 4066	709	9.472 7633	772	0.527 2367	9.981 6433	63	30	
	40	9.454 4775	709	9.472 8405	771	0.527 1595	9.981 6370	62	20	
	50	9.454 5484	708	9.472 9176	771	0.527 0824	9.981 6308	63	10	
33	0	9.454 6192	709	9.472 9947	771	0.527 0053	9.981 6245	62	0	27
	10	9.454 6901	708	9.473 0718	771	0.526 9282	9.981 6183	63	50	
	20	9.454 7609	708	9.473 1489	771	0.526 8511	9.981 6120	63	40	
	30	9.454 8317	708	9.473 2260	770	0.526 7740	9.981 6057	62	30	
	40	9.454 9025	708	9.473 3030	771	0.526 6970	9.981 5995	63	20	
	50	9.454 9733	708	9.473 3801	771	0.526 6199	9.981 5932	62	10	
34	0	9.455 0441	708	9.473 4572	770	0.526 5428	9.981 5870	63	0	26
	10	9.455 1149	707	9.473 5342	770	0.526 4658	9.981 5807	63	50	
	20	9.455 1856	708	9.473 6112	770	0.526 3888	9.981 5744	62	40	
	30	9.455 2564	707	9.473 6882	770	0.526 3118	9.981 5682	63	30	
	40	9.455 3271	708	9.473 7652	770	0.526 2348	9.981 5619	63	20	
	50	9.455 3979	707	9.473 8422	770	0.526 1578	9.981 5556	62	10	
35	0	9.455 4686	707	9.473 9192	770	0.526 0808	9.981 5494	63	0	25
	10	9.455 5393	706	9.473 9962	769	0.526 0038	9.981 5431	63	50	
	20	9.455 6099	707	9.474 0731	770	0.525 9269	9.981 5368	63	40	
	30	9.455 6806	707	9.474 1501	769	0.525 8499	9.981 5305	62	30	
	40	9.455 7513	706	9.474 2270	769	0.525 7730	9.981 5243	63	20	
	50	9.455 8219	707	9.474 3039	769	0.525 6961	9.981 5180	63	10	
36	0	9.455 8926	706	9.474 3808	769	0.525 6192	9.981 5117	63	0	24
	10	9.455 9632	706	9.474 4577	769	0.525 5423	9.981 5054	62	50	
	20	9.456 0338	706	9.474 5346	769	0.525 4654	9.981 4992	63	40	
	30	9.456 1044	706	9.474 6115	769	0.525 3885	9.981 4929	63	30	
	40	9.456 1750	705	9.474 6884	768	0.525 3116	9.981 4866	63	20	
	50	9.456 2455	706	9.474 7652	769	0.525 2348	9.981 4803	63	10	
37	0	9.456 3161	705	9.474 8421	768	0.525 1579	9.981 4740	62	0	23
	10	9.456 3866	706	9.474 9189	768	0.525 0811	9.981 4678	63	50	
	20	9.456 4572	705	9.474 9957	768	0.525 0043	9.981 4615	63	40	
	30	9.456 5277	705	9.475 0725	768	0.524 9275	9.981 4552	63	30	
	40	9.456 5982	705	9.475 1493	768	0.524 8507	9.981 4489	63	20	
	50	9.456 6687	705	9.475 2261	768	0.524 7739	9.981 4426	63	10	
38	0	9.456 7392	705	9.475 3029	767	0.524 6971	9.981 4363	63	0	22
	10	9.456 8097	704	9.475 3796	768	0.524 6204	9.981 4300	63	50	
	20	9.456 8801	705	9.475 4564	767	0.524 5436	9.981 4237	63	40	
	30	9.456 9506	704	9.475 5331	768	0.524 4669	9.981 4174	63	30	
	40	9.457 0210	704	9.475 6099	767	0.524 3901	9.981 4111	62	20	
	50	9.457 0914	704	9.475 6866	767	0.524 3134	9.981 4049	63	10	
39	0	9.457 1618	704	9.475 7633	767	0.524 2367	9.981 3986	63	0	21
	10	9.457 2322	704	9.475 8400	767	0.524 1600	9.981 3923	63	50	
	20	9.457 3026	704	9.475 9167	766	0.524 0833	9.981 3860	63	40	
	30	9.457 3730	704	9.475 9933	767	0.524 0067	9.981 3797	63	30	
	40	9.457 4434	703	9.476 0700	766	0.523 9300	9.981 3734	63	20	
	50	9.457 5137	703	9.476 1466	767	0.523 8534	9.981 3671	63	10	
40	0	9.457 5840		9.476 2233		0.523 7767	9.981 3608		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

73°

	770
1	77.0
2	154.0
3	231.0
4	308.0
5	385.0
6	462.0
7	539.0
8	616.0
9	693.0

	767
1	76.7
2	153.4
3	230.1
4	306.8
5	383.5
6	460.2
7	536.9
8	613.6
9	690.3

	710
1	71.0
2	142.0
3	213.0
4	284.0
5	355.0
6	426.0
7	497.0
8	568.0
9	639.0

	707
1	70.7
2	141.4
3	212.1
4	282.8
5	353.5
6	424.2
7	494.9
8	565.6
9	636.3

	704
1	70.4
2	140.8
3	211.2
4	281.6
5	352.0
6	422.4
7	492.8
8	563.2
9	633.6

	63
1	6.3
2	12.6
3	18.9
4	25.2
5	31.5
6	37.8
7	44.1
8	50.4
9	56.7

16°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.457 5840	704	9.476 2233	766	0.523 7767	9.981 3608	63	0	20
	10	9.457 6544	703	9.476 2999	766	0.523 7001	9.981 3545	64	50	
	20	9.457 7247	703	9.476 3765	766	0.523 6235	9.981 3481	63	40	
	30	9.457 7950	703	9.476 4531	766	0.523 5469	9.981 3418	63	30	
	40	9.457 8653	702	9.476 5297	766	0.523 4703	9.981 3355	63	20	
	50	9.457 9355	703	9.476 6063	766	0.523 3937	9.981 3292	63	10	
41	0	9.458 0058	702	9.476 6829	765	0.523 3171	9.981 3229	63	0	19
	10	9.458 0760	703	9.476 7594	766	0.523 2406	9.981 3166	63	50	
	20	9.458 1463	702	9.476 8360	765	0.523 1640	9.981 3103	63	40	
	30	9.458 2165	702	9.476 9125	766	0.523 0875	9.981 3040	63	30	
	40	9.458 2867	702	9.476 9891	765	0.523 0109	9.981 2977	64	20	
	50	9.458 3569	702	9.477 0656	765	0.522 9344	9.981 2913	63	10	
42	0	9.458 4271	702	9.477 1421	765	0.522 8579	9.981 2850	63	0	18
	10	9.458 4973	701	9.477 2186	764	0.522 7814	9.981 2787	63	50	
	20	9.458 5674	702	9.477 2950	765	0.522 7050	9.981 2724	63	40	
	30	9.458 6376	701	9.477 3715	765	0.522 6285	9.981 2661	63	30	
	40	9.458 7077	701	9.477 4480	764	0.522 5520	9.981 2598	64	20	
	50	9.458 7778	702	9.477 5244	765	0.522 4756	9.981 2534	63	10	
43	0	9.458 8480	701	9.477 6009	764	0.522 3991	9.981 2471	63	0	17
	10	9.458 9181	701	9.477 6773	764	0.522 3227	9.981 2408	63	50	
	20	9.458 9882	700	9.477 7537	764	0.522 2463	9.981 2345	64	40	
	30	9.459 0582	701	9.477 8301	764	0.522 1699	9.981 2281	63	30	
	40	9.459 1283	700	9.477 9065	764	0.522 0935	9.981 2218	63	20	
	50	9.459 1983	701	9.477 9829	763	0.522 0171	9.981 2155	64	10	
44	0	9.459 2684	700	9.478 0592	764	0.521 9408	9.981 2091	63	0	16
	10	9.459 3384	700	9.478 1356	763	0.521 8644	9.981 2028	63	50	
	20	9.459 4084	700	9.478 2119	764	0.521 7881	9.981 1965	63	40	
	30	9.459 4784	700	9.478 2883	763	0.521 7117	9.981 1902	64	30	
	40	9.459 5484	700	9.478 3646	763	0.521 6354	9.981 1838	63	20	
	50	9.459 6184	700	9.478 4409	763	0.521 5591	9.981 1775	64	10	
45	0	9.459 6884	699	9.478 5172	763	0.521 4828	9.981 1711	63	0	15
	10	9.459 7583	699	9.478 5935	763	0.521 4065	9.981 1648	63	50	
	20	9.459 8282	700	9.478 6698	762	0.521 3302	9.981 1585	64	40	
	30	9.459 8982	699	9.478 7460	763	0.521 2540	9.981 1521	63	30	
	40	9.459 9681	699	9.478 8223	762	0.521 1777	9.981 1458	63	20	
	50	9.460 0380	699	9.478 8985	763	0.521 1015	9.981 1395	64	10	
46	0	9.460 1079	699	9.478 9748	762	0.521 0252	9.981 1331	63	0	14
	10	9.460 1778	698	9.479 0510	762	0.520 9490	9.981 1268	64	50	
	20	9.460 2476	699	9.479 1272	762	0.520 8728	9.981 1204	63	40	
	30	9.460 3175	698	9.479 2034	762	0.520 7966	9.981 1141	64	30	
	40	9.460 3873	699	9.479 2796	762	0.520 7204	9.981 1077	63	20	
	50	9.460 4572	698	9.479 3558	761	0.520 6442	9.981 1014	64	10	
47	0	9.460 5270	698	9.479 4319	762	0.520 5681	9.981 0950	63	0	13
	10	9.460 5968	698	9.479 5081	761	0.520 4919	9.981 0887	64	50	
	20	9.460 6666	698	9.479 5842	762	0.520 4158	9.981 0823	63	40	
	30	9.460 7364	697	9.479 6604	761	0.520 3396	9.981 0760	64	30	
	40	9.460 8061	698	9.479 7365	761	0.520 2635	9.981 0696	63	20	
	50	9.460 8759	697	9.479 8126	761	0.520 1874	9.981 0633	64	10	
48	0	9.460 9456	698	9.479 8887	761	0.520 1113	9.981 0569	64	0	12
	10	9.461 0154	697	9.479 9648	761	0.520 0352	9.981 0505	63	50	
	20	9.461 0851	697	9.480 0409	761	0.519 9591	9.981 0442	64	40	
	30	9.461 1548	697	9.480 1170	760	0.519 8830	9.981 0378	63	30	
	40	9.461 2245	697	9.480 1930	761	0.519 8070	9.981 0315	64	20	
	50	9.461 2942	696	9.480 2691	760	0.519 7309	9.981 0251	64	10	
49	0	9.461 3638	697	9.480 3451	760	0.519 6549	9.981 0187	63	0	11
	10	9.461 4335	696	9.480 4211	760	0.519 5789	9.981 0124	64	50	
	20	9.461 5031	697	9.480 4971	760	0.519 5029	9.981 0060	64	40	
	30	9.461 5728	696	9.480 5731	760	0.519 4269	9.980 9996	63	30	
	40	9.461 6424	696	9.480 6491	760	0.519 3509	9.980 9933	64	20	
	50	9.461 7120	696	9.480 7251	760	0.519 2749	9.980 9869	64	10	
50	0	9.461 7816		9.480 8011		0.519 1989	9.980 9805		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

766	
1	76.6
2	153.2
3	229.8
4	306.4
5	383.0
6	459.6
7	536.2
8	612.8
9	689.4

763	
1	76.3
2	152.6
3	228.9
4	305.2
5	381.5
6	457.8
7	534.1
8	610.4
9	686.7

760	
1	76.0
2	152.0
3	228.0
4	304.0
5	380.0
6	456.0
7	532.0
8	608.0
9	684.0

702	
1	70.2
2	140.4
3	210.6
4	280.8
5	351.0
6	421.2
7	491.4
8	561.6
9	631.8

699	
1	69.9
2	139.8
3	209.7
4	279.6
5	349.5
6	419.4
7	489.3
8	559.2
9	629.1

63	
1	6.3
2	12.6
3	18.9
4	25.2
5	31.5
6	37.8
7	44 1
8	50 4
9	56.7

73°

16°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.461 7816	696	9.480 8011	759	0.519 1989	9.980 9805	63	0	10
	10	9.461 8512	696	9.480 8770	760	0.519 1230	9.980 9742	64	50	
	20	9.461 9208	695	9.480 9530	759	0.519 0470	9.980 9678	64	40	
	30	9.461 9903	696	9.481 0289	759	0.518 9711	9.980 9614	63	30	
	40	9.462 0599	695	9.481 1048	759	0.518 8952	9.980 9551	64	20	
	50	9.462 1294	695	9.481 1807	759	0.518 8193	9.980 9487	64	10	
51	0	9.462 1989	695	9.481 2566	759	0.518 7434	9.980 9423	64	0	9
	10	9.462 2684	695	9.481 3325	759	0.518 6675	9.980 9359	64	50	
	20	9.462 3379	695	9.481 4084	759	0.518 5916	9.980 9295	63	40	
	30	9.462 4074	695	9.481 4843	758	0.518 5157	9.980 9232	64	30	
	40	9.462 4769	695	9.481 5601	759	0.518 4399	9.980 9168	64	20	
	50	9.462 5464	694	9.481 6360	758	0.518 3640	9.980 9104	64	10	
52	0	9.462 6158	695	9.481 7118	758	0.518 2882	9.980 9040	64	0	8
	10	9.462 6853	694	9.481 7876	758	0.518 2124	9.980 8976	64	50	
	20	9.462 7547	694	9.481 8634	759	0.518 1366	9.980 8912	63	40	
	30	9.462 8241	694	9.481 9393	757	0.518 0607	9.980 8849	64	30	
	40	9.462 8935	694	9.482 0150	758	0.517 9850	9.980 8785	64	20	
	50	9.462 9629	694	9.482 0908	758	0.517 9092	9.980 8721	64	10	
53	0	9.463 0323	694	9.482 1666	758	0.517 8334	9.980 8657	64	0	7
	10	9.463 1017	693	9.482 2424	757	0.517 7576	9.980 8593	64	50	
	20	9.463 1710	694	9.482 3181	757	0.517 6819	9.980 8529	64	40	
	30	9.463 2404	693	9.482 3938	758	0.517 6062	9.980 8465	64	30	
	40	9.463 3097	693	9.482 4696	757	0.517 5304	9.980 8401	64	20	
	50	9.463 3790	693	9.482 5453	757	0.517 4547	9.980 8337	64	10	
54	0	9.463 4483	693	9.482 6210	757	0.517 3790	9.980 8273	64	0	6
	10	9.463 5176	693	9.482 6967	757	0.517 3033	9.980 8209	64	50	
	20	9.463 5869	693	9.482 7724	756	0.517 2276	9.980 8145	64	40	
	30	9.463 6562	692	9.482 8480	757	0.517 1520	9.980 8081	64	30	
	40	9.463 7254	693	9.482 9237	756	0.517 0763	9.980 8017	64	20	
	50	9.463 7947	692	9.482 9993	757	0.517 0007	9.980 7953	64	10	
55	0	9.463 8639	692	9.483 0750	756	0.516 9250	9.980 7889	64	0	5
	10	9.463 9331	692	9.483 1506	756	0.516 8494	9.980 7825	64	50	
	20	9.464 0023	692	9.483 2262	756	0.516 7738	9.980 7761	64	40	
	30	9.464 0715	692	9.483 3018	756	0.516 6982	9.980 7697	64	30	
	40	9.464 1407	692	9.483 3774	756	0.516 6226	9.980 7633	64	20	
	50	9.464 2099	691	9.483 4530	756	0.516 5470	9.980 7569	64	10	
56	0	9.464 2790	692	9.483 5286	755	0.516 4714	9.980 7505	64	0	4
	10	9.464 3482	691	9.483 6041	756	0.516 3959	9.980 7441	64	50	
	20	9.464 4173	692	9.483 6797	755	0.516 3203	9.980 7377	64	40	
	30	9.464 4865	691	9.483 7552	755	0.516 2448	9.980 7313	65	30	
	40	9.464 5556	691	9.483 8307	756	0.516 1693	9.980 7248	64	20	
	50	9.464 6247	691	9.483 9063	755	0.516 0937	9.980 7184	64	10	
57	0	9.464 6938	690	9.483 9818	755	0.516 0182	9.980 7120	64	0	3
	10	9.464 7628	691	9.484 0573	754	0.515 9427	9.980 7056	64	50	
	20	9.464 8319	691	9.484 1327	755	0.515 8673	9.980 6992	65	40	
	30	9.464 9010	690	9.484 2082	755	0.515 7918	9.980 6927	64	30	
	40	9.464 9700	690	9.484 2837	754	0.515 7163	9.980 6863	64	20	
	50	9.465 0390	691	9.484 3591	755	0.515 6409	9.980 6799	64	10	
58	0	9.465 1081	690	9.484 4346	754	0.515 5654	9.980 6735	64	0	2
	10	9.465 1771	690	9.484 5100	754	0.515 4900	9.980 6671	65	50	
	20	9.465 2461	689	9.484 5854	754	0.515 4146	9.980 6606	64	40	
	30	9.465 3150	690	9.484 6608	754	0.515 3392	9.980 6542	64	30	
	40	9.465 3840	690	9.484 7362	754	0.515 2638	9.980 6478	65	20	
	50	9.465 4530	689	9.484 8116	754	0.515 1884	9.980 6413	64	10	
59	0	9.465 5219	689	9.484 8870	754	0.515 1130	9.980 6349	64	0	1
	10	9.465 5908	690	9.484 9624	753	0.515 0376	9.980 6285	64	50	
	20	9.465 6598	689	9.485 0377	754	0.514 9623	9.980 6221	65	40	
	30	9.465 7287	689	9.485 1131	753	0.514 8869	9.980 6156	64	30	
	40	9.465 7976	689	9.485 1884	753	0.514 8116	9.980 6092	64	20	
	50	9.465 8665	688	9.485 2637	753	0.514 7363	9.980 6028	65	10	
60	0	9.465 9353		9.485 3390		0.514 6610	9.980 5963		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

73°

	757
1	75.7
2	151.4
3	227.1
4	302.8
5	378.5
6	454.2
7	529.9
8	605.6
9	681.3

	754
1	75.4
2	150.8
3	226.2
4	301.6
5	377.0
6	452.4
7	527.8
8	603.2
9	678.6

	696
1	69.6
2	139.2
3	208.8
4	278.4
5	348.0
6	417.6
7	487.2
8	556.8
9	626.4

	693
1	69.3
2	138.6
3	207.9
4	277.2
5	346.5
6	415.8
7	485.1
8	554.4
9	623.7

	690
1	69.0
2	138.0
3	207.0
4	276.0
5	345.0
6	414.0
7	483.0
8	552.0
9	621.0

	64
1	6.4
2	12.8
3	19.2
4	25.6
5	32.0
6	38.4
7	44.8
8	51.2
9	57.6

17°

753	
1	75.3
2	150.6
3	225.9
4	301.2
5	376.5
6	451.8
7	527.1
8	602.4
9	677.7

750	
1	75.0
2	150.0
3	225.0
4	300.0
5	375.0
6	450.0
7	525.0
8	600.0
9	675.0

747	
1	74.7
2	149.4
3	224.1
4	298.8
5	373.5
6	448.2
7	522.9
8	597.6
9	672.3

687	
1	68.7
2	137.4
3	206.1
4	274.8
5	343.5
6	412.2
7	480.9
8	549.6
9	618.3

684	
1	68.4
2	136.8
3	205.2
4	273.6
5	342.0
6	410.4
7	478.8
8	547.2
9	615.6

65	
1	6.5
2	13.0
3	19.5
4	26.0
5	32.5
6	39.0
7	45.5
8	52.0
9	58.5

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.465 9353	689	9.485 3390	753	0.514 6610	9.980 5963	64	0	60
	10	9.466 0042	689	9.485 4143	753	0.514 5857	9.980 5899	65	50	
	20	9.466 0731	688	9.485 4896	753	0.514 5104	9.980 5834	64	40	
	30	9.466 1419	688	9.485 5649	753	0.514 4351	9.980 5770	64	30	
	40	9.466 2107	688	9.485 6402	752	0.514 3598	9.980 5706	65	20	
	50	9.466 2795	688	9.485 7154	753	0.514 2846	9.980 5641	64	10	
1	0	9.466 3483	688	9.485 7907	752	0.514 2093	9.980 5577	65	0	59
	10	9.466 4171	688	9.485 8659	752	0.514 1341	9.980 5512	64	50	
	20	9.466 4859	688	9.485 9411	752	0.514 0589	9.980 5448	65	40	
	30	9.466 5547	687	9.486 0163	752	0.513 9837	9.980 5383	64	30	
	40	9.466 6234	688	9.486 0915	752	0.513 9085	9.980 5319	65	20	
	50	9.466 6922	687	9.486 1667	752	0.513 8333	9.980 5254	64	10	
2	0	9.466 7609	687	9.486 2419	752	0.513 7581	9.980 5190	65	0	58
	10	9.466 8296	687	9.486 3171	751	0.513 6829	9.980 5125	64	50	
	20	9.466 8983	687	9.486 3922	752	0.513 6078	9.980 5061	65	40	
	30	9.466 9670	687	9.486 4674	751	0.513 5326	9.980 4996	64	30	
	40	9.467 0357	687	9.486 5425	752	0.513 4575	9.980 4932	65	20	
	50	9.467 1044	686	9.486 6177	751	0.513 3823	9.980 4867	64	10	
3	0	9.467 1730	687	9.486 6928	751	0.513 3072	9.980 4803	65	0	57
	10	9.467 2417	686	9.486 7679	751	0.513 2321	9.980 4738	65	50	
	20	9.467 3103	686	9.486 8430	751	0.513 1570	9.980 4673	64	40	
	30	9.467 3789	687	9.486 9181	750	0.513 0819	9.980 4609	65	30	
	40	9.467 4476	686	9.486 9931	751	0.513 0069	9.980 4544	64	20	
	50	9.467 5162	686	9.487 0682	751	0.512 9318	9.980 4480	65	10	
4	0	9.467 5848	685	9.487 1433	750	0.512 8567	9.980 4415	65	0	56
	10	9.467 6533	686	9.487 2183	750	0.512 7817	9.980 4350	64	50	
	20	9.467 7219	685	9.487 2933	750	0.512 7067	9.980 4286	65	40	
	30	9.467 7904	686	9.487 3683	751	0.512 6317	9.980 4221	65	30	
	40	9.467 8590	685	9.487 4434	750	0.512 5566	9.980 4156	64	20	
	50	9.467 9275	685	9.487 5184	749	0.512 4816	9.980 4092	65	10	
5	0	9.467 9960	685	9.487 5933	750	0.512 4067	9.980 4027	65	0	55
	10	9.468 0645	685	9.487 6683	750	0.512 3317	9.980 3962	64	50	
	20	9.468 1330	685	9.487 7433	749	0.512 2567	9.980 3898	65	40	
	30	9.468 2015	685	9.487 8182	750	0.512 1818	9.980 3833	65	30	
	40	9.468 2700	684	9.487 8932	749	0.512 1068	9.980 3768	65	20	
	50	9.468 3384	685	9.487 9681	749	0.512 0319	9.980 3703	64	10	
6	0	9.468 4069	684	9.488 0430	750	0.511 9570	9.980 3639	65	0	54
	10	9.468 4753	685	9.488 1180	749	0.511 8820	9.980 3574	65	50	
	20	9.468 5438	684	9.488 1929	748	0.511 8071	9.980 3509	65	40	
	30	9.468 6122	684	9.488 2677	749	0.511 7323	9.980 3444	65	30	
	40	9.468 6806	684	9.488 3426	749	0.511 6574	9.980 3379	64	20	
	50	9.468 7490	683	9.488 4175	749	0.511 5825	9.980 3315	65	10	
7	0	9.468 8173	684	9.488 4924	748	0.511 5076	9.980 3250	65	0	53
	10	9.468 8857	683	9.488 5672	748	0.511 4328	9.980 3185	65	50	
	20	9.468 9540	684	9.488 6420	749	0.511 3580	9.980 3120	65	40	
	30	9.469 0224	683	9.488 7169	748	0.511 2831	9.980 3055	65	30	
	40	9.469 0907	683	9.488 7917	748	0.511 2083	9.980 2990	65	20	
	50	9.469 1590	683	9.488 8665	748	0.511 1335	9.980 2925	65	10	
8	0	9.469 2273	683	9.488 9413	748	0.511 0587	9.980 2860	64	0	52
	10	9.469 2956	683	9.489 0161	748	0.510 9839	9.980 2796	65	50	
	20	9.469 3639	683	9.489 0909	747	0.510 9091	9.980 2731	65	40	
	30	9.469 4322	682	9.489 1656	748	0.510 8344	9.980 2666	65	30	
	40	9.469 5004	683	9.489 2404	747	0.510 7596	9.980 2601	65	20	
	50	9.469 5687	682	9.489 3151	747	0.510 6849	9.980 2536	65	10	
9	0	9.469 6369	682	9.489 3898	748	0.510 6102	9.980 2471	65	0	51
	10	9.469 7051	683	9.489 4646	747	0.510 5354	9.980 2406	65	50	
	20	9.469 7734	682	9.489 5393	747	0.510 4607	9.980 2341	65	40	
	30	9.469 8416	681	9.489 6140	747	0.510 3860	9.980 2276	65	30	
	40	9.469 9097	682	9.489 6887	746	0.510 3113	9.980 2211	65	20	
	50	9.469 9779	682	9.489 7633	747	0.510 2367	9.980 2146	65	10	
10	0	9.470 0461		9.489 8380		0.510 1620	9.980 2081		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

72°

17°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.470 0461	681	9.489 8380	747	0.510 1620	9.980 2081	65	0	50
	10	9.470 1142	682	9.489 9127	746	0.510 0873	9.980 2016	65	50	
	20	9.470 1824	681	9.489 9873	747	0.510 0127	9.980 1951	65	40	
	30	9.470 2505	681	9.490 0620	746	0.509 9380	9.980 1886	66	30	
	40	9.470 3186	681	9.490 1366	746	0.509 8634	9.980 1820	65	20	
	50	9.470 3867	681	9.490 2112	746	0.509 7888	9.980 1755	65	10	
11	0	9.470 4548	681	9.490 2858	746	0.509 7142	9.980 1690	65	0	49
	10	9.470 5229	681	9.490 3604	746	0.509 6396	9.980 1625	65	50	
	20	9.470 5910	680	9.490 4350	746	0.509 5650	9.980 1560	65	40	
	30	9.470 6590	681	9.490 5096	745	0.509 4904	9.980 1495	65	30	
	40	9.470 7271	680	9.490 5841	746	0.509 4159	9.980 1430	65	20	
	50	9.470 7951	680	9.490 6587	745	0.509 3413	9.980 1365	66	10	
12	0	9.470 8631	681	9.490 7332	745	0.509 2668	9.980 1299	65	0	48
	10	9.470 9312	680	9.490 8077	746	0.509 1923	9.980 1234	65	50	
	20	9.470 9992	679	9.490 8823	745	0.509 1177	9.980 1169	65	40	
	30	9.471 0671	680	9.490 9568	745	0.509 0432	9.980 1104	65	30	
	40	9.471 1351	680	9.491 0313	745	0.508 9687	9.980 1039	66	20	
	50	9.471 2031	679	9.491 1058	744	0.508 8942	9.980 0973	65	10	
13	0	9.471 2710	680	9.491 1802	745	0.508 8198	9.980 0908	65	0	47
	10	9.471 3390	679	9.491 2547	745	0.508 7453	9.980 0843	65	50	
	20	9.471 4069	679	9.491 3292	744	0.508 6708	9.980 0778	66	40	
	30	9.471 4748	679	9.491 4036	744	0.508 5964	9.980 0712	65	30	
	40	9.471 5427	679	9.491 4780	745	0.508 5220	9.980 0647	65	20	
	50	9.471 6106	679	9.491 5525	744	0.508 4475	9.980 0582	66	10	
14	0	9.471 6785	679	9.491 6269	744	0.508 3731	9.980 0516	65	0	46
	10	9.471 7464	679	9.491 7013	744	0.508 2987	9.980 0451	65	50	
	20	9.471 8143	678	9.491 7757	744	0.508 2243	9.980 0386	66	40	
	30	9.471 8821	678	9.491 8501	743	0.508 1499	9.980 0320	65	30	
	40	9.471 9499	679	9.491 9244	744	0.508 0756	9.980 0255	65	20	
	50	9.472 0178	678	9.491 9988	743	0.508 0012	9.980 0190	66	10	
15	0	9.472 0856	678	9.492 0731	744	0.507 9269	9.980 0124	65	0	45
	10	9.472 1534	678	9.492 1475	743	0.507 8525	9.980 0059	65	50	
	20	9.472 2212	678	9.492 2218	743	0.507 7782	9.979 9994	66	40	
	30	9.472 2890	677	9.492 2961	744	0.507 7039	9.979 9928	65	30	
	40	9.472 3567	678	9.492 3705	743	0.507 6295	9.979 9863	66	20	
	50	9.472 4245	677	9.492 4448	742	0.507 5552	9.979 9797	65	10	
16	0	9.472 4922	678	9.492 5190	743	0.507 4810	9.979 9732	66	0	44
	10	9.472 5600	677	9.492 5933	743	0.507 4067	9.979 9666	65	50	
	20	9.472 6277	677	9.492 6676	742	0.507 3324	9.979 9601	65	40	
	30	9.472 6954	677	9.492 7418	743	0.507 2582	9.979 9536	66	30	
	40	9.472 7631	677	9.492 8161	742	0.507 1839	9.979 9470	65	20	
	50	9.472 8308	677	9.492 8903	743	0.507 1097	9.979 9405	66	10	
17	0	9.472 8985	676	9.492 9646	742	0.507 0354	9.979 9339	65	0	43
	10	9.472 9661	677	9.493 0388	742	0.506 9612	9.979 9274	66	50	
	20	9.473 0338	676	9.493 1130	742	0.506 8870	9.979 9208	66	40	
	30	9.473 1014	676	9.493 1872	742	0.506 8128	9.979 9142	65	30	
	40	9.473 1690	677	9.493 2614	741	0.506 7386	9.979 9077	66	20	
	50	9.473 2367	676	9.493 3355	742	0.506 6645	9.979 9011	65	10	
18	0	9.473 3043	676	9.493 4097	741	0.506 5903	9.979 8946	66	0	42
	10	9.473 3719	675	9.493 4838	742	0.506 5162	9.979 8880	65	50	
	20	9.473 4394	676	9.493 5580	741	0.506 4420	9.979 8815	66	40	
	30	9.473 5070	676	9.493 6321	741	0.506 3679	9.979 8749	66	30	
	40	9.473 5746	675	9.493 7062	742	0.506 2938	9.979 8683	65	20	
	50	9.473 6421	676	9.493 7804	741	0.506 2196	9.979 8618	66	10	
19	0	9.473 7097	675	9.493 8545	740	0.506 1455	9.979 8552	66	0	41
	10	9.473 7772	675	9.493 9285	741	0.506 0715	9.979 8486	65	50	
	20	9.473 8447	675	9.494 0026	741	0.505 9974	9.979 8421	66	40	
	30	9.473 9122	675	9.494 0767	741	0.505 9233	9.979 8355	66	30	
	40	9.473 9797	675	9.494 1508	740	0.505 8492	9.979 8289	65	20	
	50	9.474 0472	674	9.494 2248	740	0.505 7752	9.979 8224	66	10	
20	0	9.474 1146		9.494 2988		0.505 7012	9.979 8158		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

72°

	744
1	74.4
2	148.8
3	223.2
4	297.6
5	372.0
6	446.4
7	520.8
8	595.2
9	669.6

	741
1	74.1
2	148.2
3	222.3
4	296.4
5	370.5
6	444.6
7	518.7
8	592.8
9	666.9

	681
1	68.1
2	136.2
3	204.3
4	272.4
5	340.5
6	408.6
7	476.7
8	544.8
9	612.9

	678
1	67.8
2	135.6
3	203.4
4	271.2
5	339.0
6	406.8
7	474.6
8	542.4
9	610.2

	675
1	67.5
2	135.0
3	202.5
4	270.0
5	337.5
6	405.0
7	472.5
8	540.0
9	607.5

	66
1	6.6
2	13.2
3	19.8
4	26.4
5	33.0
6	39.6
7	46.2
8	52.8
9	59.4

17°

	741
1	74.1
2	148.2
3	222.3
4	296.4
5	370.5
6	444.6
7	518.7
8	592.8
9	666.9

	738
1	73.8
2	147.6
3	221.4
4	295.2
5	369.0
6	442.8
7	516.6
8	590.4
9	664.2

	735
1	73.5
2	147.0
3	220.5
4	294.0
5	367.5
6	441.0
7	514.5
8	588.0
9	661.5

	674
1	67.4
2	134.8
3	202.2
4	269.6
5	337.0
6	404.4
7	471.8
8	539.2
9	606.6

	671
1	67.1
2	134.2
3	201.3
4	268.4
5	335.5
6	402.6
7	469.7
8	536.8
9	603.9

	66
1	6.6
2	13.2
3	19.8
4	26.4
5	33.0
6	39.6
7	46.2
8	52.8
9	59.4

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.474 1146	675	9.494 2988	741	0.505 7012	9.979 8158	66	0	40
	10	9.474 1821	674	9.494 3729	740	0.505 6271	9.979 8092	65	50	
	20	9.474 2495	675	9.494 4469	740	0.505 5531	9.979 8027	66	40	
	30	9.474 3170	674	9.494 5209	740	0.505 4791	9.979 7961	66	30	
	40	9.474 3844	674	9.494 5949	740	0.505 4051	9.979 7895	66	20	
	50	9.474 4518	674	9.494 6689	740	0.505 3311	9.979 7829	65	10	
21	0	9.474 5192	674	9.494 7429	739	0.505 2571	9.979 7764	66	0	39
	10	9.474 5866	674	9.494 8168	740	0.505 1832	9.979 7698	66	50	
	20	9.474 6540	673	9.494 8908	739	0.505 1092	9.979 7632	66	40	
	30	9.474 7213	674	9.494 9647	740	0.505 0353	9.979 7566	66	30	
	40	9.474 7887	673	9.495 0387	739	0.504 9613	9.979 7500	65	20	
	50	9.474 8560	674	9.495 1126	739	0.504 8874	9.979 7435	66	10	
22	0	9.474 9234	673	9.495 1865	739	0.504 8135	9.979 7369	66	0	38
	10	9.474 9907	673	9.495 2604	739	0.504 7396	9.979 7303	66	50	
	20	9.475 0580	673	9.495 3343	739	0.504 6657	9.979 7237	66	40	
	30	9.475 1253	673	9.495 4082	739	0.504 5918	9.979 7171	66	30	
	40	9.475 1926	672	9.495 4821	738	0.504 5179	9.979 7105	66	20	
	50	9.475 2598	673	9.495 5559	739	0.504 4441	9.979 7039	66	10	
23	0	9.475 3271	673	9.495 6298	738	0.504 3702	9.979 6973	66	0	37
	10	9.475 3944	672	9.495 7036	738	0.504 2964	9.979 6907	65	50	
	20	9.475 4616	672	9.495 7774	739	0.504 2226	9.979 6842	66	40	
	30	9.475 5288	672	9.495 8513	738	0.504 1487	9.979 6776	66	30	
	40	9.475 5960	672	9.495 9251	738	0.504 0749	9.979 6710	66	20	
	50	9.475 6632	672	9.495 9989	738	0.504 0011	9.979 6644	66	10	
24	0	9.475 7304	672	9.496 0727	737	0.503 9273	9.979 6578	66	0	36
	10	9.475 7976	672	9.496 1464	738	0.503 8536	9.979 6512	66	50	
	20	9.475 8648	671	9.496 2202	738	0.503 7798	9.979 6446	66	40	
	30	9.475 9319	672	9.496 2940	737	0.503 7060	9.979 6380	66	30	
	40	9.475 9991	671	9.496 3677	738	0.503 6323	9.979 6314	66	20	
	50	9.476 0662	672	9.496 4415	737	0.503 5585	9.979 6248	66	10	
25	0	9.476 1334	671	9.496 5152	737	0.503 4848	9.979 6182	66	0	35
	10	9.476 2005	671	9.495 5889	737	0.503 4111	9.979 6116	67	50	
	20	9.476 2676	671	9.496 6626	737	0.503 3374	9.979 6049	66	40	
	30	9.476 3347	670	9.496 7363	737	0.503 2637	9.979 5983	66	30	
	40	9.476 4017	671	9.496 8100	737	0.503 1900	9.979 5917	66	20	
	50	9.476 4688	671	9.496 8837	737	0.503 1163	9.979 5851	66	10	
26	0	9.476 5359	670	9.496 9574	736	0.503 0426	9.979 5785	66	0	34
	10	9.476 6029	670	9.497 0310	737	0.502 9690	9.979 5719	66	50	
	20	9.476 6699	671	9.497 1047	736	0.502 8953	9.979 5653	66	40	
	30	9.476 7370	670	9.497 1783	736	0.502 8217	9.979 5587	66	30	
	40	9.476 8040	670	9.497 2519	736	0.502 7481	9.979 5521	67	20	
	50	9.476 8710	670	9.497 3255	736	0.502 6745	9.979 5454	66	10	
27	0	9.476 9380	669	9.497 3991	736	0.502 6009	9.979 5388	66	0	33
	10	9.477 0049	670	9.497 4727	736	0.502 5273	9.979 5322	66	50	
	20	9.477 0719	670	9.497 5463	736	0.502 4537	9.979 5256	66	40	
	30	9.477 1389	669	9.497 6199	736	0.502 3801	9.979 5190	67	30	
	40	9.477 2058	669	9.497 6935	735	0.502 3065	9.979 5123	66	20	
	50	9.477 2727	669	9.497 7670	736	0.502 2330	9.979 5057	66	10	
28	0	9.477 3396	670	9.497 8406	735	0.502 1594	9.979 4991	66	0	32
	10	9.477 4066	669	9.497 9141	735	0.502 0859	9.979 4925	67	50	
	20	9.477 4735	668	9.497 9876	735	0.502 0124	9.979 4858	66	40	
	30	9.477 5403	669	9.498 0611	735	0.501 9389	9.979 4792	66	30	
	40	9.477 6072	669	9.498 1346	735	0.501 8654	9.979 4726	67	20	
	50	9.477 6741	668	9.498 2081	735	0.501 7919	9.979 4659	66	10	
29	0	9.477 7409	669	9.498 2816	735	0.501 7184	9.979 4593	66	0	31
	10	9.477 8078	668	9.498 3551	735	0.501 6449	9.979 4527	67	50	
	20	9.477 8746	668	9.498 4286	734	0.501 5714	9.979 4460	66	40	
	30	9.477 9414	668	9.498 5020	734	0.501 4980	9.979 4394	66	30	
	40	9.478 0082	668	9.498 5754	735	0.501 4246	9.979 4328	67	20	
	50	9.478 0750	668	9.498 6489	734	0.501 3511	9.979 4261	66	10	
30	0	9.478 1418		9.498 7223		0.501 2777	9.979 4195		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

72°

17°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.478 1418	668	9.498 7223	734	0.501 2777	9.979 4195	66	0	30
	10	9.478 2086	667	9.498 7957	734	0.501 2043	9.979 4129	67	50	
	20	9.478 2753	668	9.498 8691	734	0.501 1309	9.979 4062	66	40	
	30	9.478 3421	667	9.498 9425	734	0.501 0575	9.979 3996	67	30	
	40	9.478 4088	668	9.499 0159	734	0.500 9841	9.979 3929	66	20	
	50	9.478 4756	667	9.499 0893	733	0.500 9107	9.979 3863	67	10	
31	0	9.478 5423	667	9.499 1626	734	0.500 8374	9.979 3796	66	0	29
	10	9.478 6090	667	9.499 2360	733	0.500 7640	9.979 3730	66	50	
	20	9.478 6757	667	9.499 3093	733	0.500 6907	9.979 3664	67	40	
	30	9.478 7424	666	9.499 3826	734	0.500 6174	9.979 3597	66	30	
	40	9.478 8090	667	9.499 4560	733	0.500 5440	9.979 3531	67	20	
	50	9.478 8757	666	9.499 5293	733	0.500 4707	9.979 3464	66	10	
32	0	9.478 9423	667	9.499 6026	733	0.500 3974	9.979 3398	67	0	28
	10	9.479 0090	666	9.499 6759	732	0.500 3241	9.979 3331	66	50	
	20	9.479 0756	666	9.499 7491	733	0.500 2509	9.979 3265	67	40	
	30	9.479 1422	666	9.499 8224	733	0.500 1776	9.979 3198	67	30	
	40	9.479 2088	666	9.499 8957	732	0.500 1043	9.979 3131	66	20	
	50	9.479 2754	666	9.499 9689	733	0.500 0311	9.979 3065	67	10	
33	0	9.479 3420	666	9.500 0422	732	0.499 9578	9.979 2998	66	0	27
	10	9.479 4086	665	9.500 1154	732	0.499 8846	9.979 2932	67	50	
	20	9.479 4751	666	9.500 1886	732	0.499 8114	9.979 2865	67	40	
	30	9.479 5417	665	9.500 2618	732	0.499 7382	9.979 2798	66	30	
	40	9.479 6082	665	9.500 3350	732	0.499 6650	9.979 2732	67	20	
	50	9.479 6747	665	9.500 4082	732	0.499 5918	9.979 2665	66	10	
34	0	9.479 7412	665	9.500 4814	732	0.499 5186	9.979 2599	67	0	26
	10	9.479 8077	665	9.500 5546	731	0.499 4454	9.979 2532	67	50	
	20	9.479 8742	665	9.500 6277	732	0.499 3723	9.979 2465	67	40	
	30	9.479 9407	665	9.500 7009	731	0.499 2991	9.979 2398	66	30	
	40	9.480 0072	664	9.500 7740	731	0.499 2260	9.979 2332	67	20	
	50	9.480 0736	665	9.500 8471	732	0.499 1529	9.979 2265	67	10	
35	0	9.480 1401	664	9.500 9203	731	0.499 0797	9.979 2198	66	0	25
	10	9.480 2065	665	9.500 9934	731	0.499 0066	9.979 2132	67	50	
	20	9.480 2730	664	9.501 0665	731	0.498 9335	9.979 2065	67	40	
	30	9.480 3394	664	9.501 1396	730	0.498 8604	9.979 1998	67	30	
	40	9.480 4058	664	9.501 2126	731	0.498 7874	9.979 1931	66	20	
	50	9.480 4722	663	9.501 2857	731	0.498 7143	9.979 1865	67	10	
36	0	9.480 5385	664	9.501 3588	730	0.498 6412	9.979 1798	67	0	24
	10	9.480 6049	664	9.501 4318	730	0.498 5682	9.979 1731	67	50	
	20	9.480 6713	663	9.501 5048	731	0.498 4952	9.979 1664	67	40	
	30	9.480 7376	664	9.501 5779	730	0.498 4221	9.979 1597	66	30	
	40	9.480 8040	663	9.501 6509	730	0.498 3491	9.979 1531	67	20	
	50	9.480 8703	663	9.501 7239	730	0.498 2761	9.979 1464	67	10	
37	0	9.480 9366	663	9.501 7969	730	0.498 2031	9.979 1397	67	0	23
	10	9.481 0029	663	9.501 8699	730	0.498 1301	9.979 1330	67	50	
	20	9.481 0692	663	9.501 9429	729	0.498 0571	9.979 1263	67	40	
	30	9.481 1355	662	9.502 0158	730	0.497 9842	9.979 1196	67	30	
	40	9.481 2017	663	9.502 0888	729	0.497 9112	9.979 1129	67	20	
	50	9.481 2680	662	9.502 1617	730	0.497 8383	9.979 1062	66	10	
38	0	9.481 3342	663	9.502 2347	729	0.497 7653	9.979 0996	67	0	22
	10	9.481 4005	662	9.502 3076	729	0.497 6924	9.979 0929	67	50	
	20	9.481 4667	662	9.502 3805	729	0.497 6195	9.979 0862	67	40	
	30	9.481 5329	662	9.502 4534	729	0.497 5466	9.979 0795	67	30	
	40	9.481 5991	662	9.502 5263	729	0.497 4737	9.979 0728	67	20	
	50	9.481 6653	662	9.502 5992	729	0.497 4008	9.979 0661	67	10	
39	0	9.481 7315	661	9.502 6721	729	0.497 3279	9.979 0594	67	0	21
	10	9.481 7976	662	9.502 7450	728	0.497 2550	9.979 0527	67	50	
	20	9.481 8638	661	9.502 8178	729	0.497 1822	9.979 0460	67	40	
	30	9.481 9299	662	9.502 8907	728	0.497 1093	9.979 0393	67	30	
	40	9.481 9961	661	9.502 9635	728	0.497 0365	9.979 0326	67	20	
	50	9.482 0622	661	9.503 0363	729	0.496 9637	9.979 0259	67	10	
40	0	9.482 1283		9.503 1092		0.496 8908	9.979 0192		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

72°

	732
1	73.2
2	146.4
3	219.6
4	292.8
5	366.0
6	439.2
7	512.4
8	585.6
9	658.8

	729
1	72.9
2	145.8
3	218.7
4	291.6
5	364.5
6	437.4
7	510.3
8	583.2
9	656.1

	668
1	66.8
2	133.6
3	200.4
4	267.2
5	334.0
6	400.8
7	467.6
8	534.4
9	601.2

	665
1	66.5
2	133.0
3	199.5
4	266.0
5	332.5
6	399.0
7	465.5
8	532.0
9	598.5

	662
1	66.2
2	132.4
3	198.6
4	264.8
5	331.0
6	397.2
7	463.4
8	529.6
9	595.8

	67
1	6.7
2	13.4
3	20.1
4	26.8
5	33.5
6	40.2
7	46.9
8	53.6
9	60.3

17°

728	
1	72.8
2	145.6
3	218.4
4	291.2
5	364.0
6	436.8
7	509.6
8	582.4
9	655.2

725	
1	72.5
2	145.0
3	217.5
4	290.0
5	362.5
6	435.0
7	507.5
8	580.0
9	652.5

661	
1	66.1
2	132.2
3	198.3
4	264.4
5	330.5
6	396.6
7	462.7
8	528.8
9	594.9

658	
1	65.8
2	131.6
3	197.4
4	263.2
5	329.0
6	394.8
7	460.6
8	526.4
9	592.2

655	
1	65.5
2	131.0
3	196.5
4	262.0
5	327.5
6	393.0
7	458.5
8	524.0
9	589.5

67	
1	6.7
2	13.4
3	20.1
4	26.8
5	33.5
6	40.2
7	46.9
8	53.6
9	60.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.482 1283	661	9.503 1092	728	0.496 8908	9.979 0192	67	0	20
	10	9.482 1944	661	9.503 1820	728	0.496 8180	9.979 0125	68	50	
	20	9.482 2605	661	9.503 2548	728	0.496 7452	9.979 0057	67	40	
	30	9.482 3266	661	9.503 3276	727	0.496 6724	9.978 9990	67	30	
	40	9.482 3927	660	9.503 4003	728	0.496 5997	9.978 9923	67	20	
	50	9.482 4587	661	9.503 4731	728	0.496 5269	9.978 9856	67	10	
41	0	9.482 5248	660	9.503 5459	727	0.496 4541	9.978 9789	67	0	19
	10	9.482 5908	660	9.503 6186	727	0.496 3814	9.978 9722	67	50	
	20	9.482 6568	660	9.503 6913	728	0.496 3087	9.978 9655	67	40	
	30	9.482 7228	660	9.503 7641	727	0.496 2359	9.978 9588	68	30	
	40	9.482 7888	660	9.503 8368	727	0.496 1632	9.978 9520	67	20	
	50	9.482 8548	660	9.503 9095	727	0.496 0905	9.978 9453	67	10	
42	0	9.482 9208	660	9.503 9822	727	0.496 0178	9.978 9386	67	0	18
	10	9.482 9868	659	9.504 0549	727	0.495 9451	9.978 9319	67	50	
	20	9.483 0527	660	9.504 1276	726	0.495 8724	9.978 9252	68	40	
	30	9.483 1187	659	9.504 2002	727	0.495 7998	9.978 9184	67	30	
	40	9.483 1846	659	9.504 2729	727	0.495 7271	9.978 9117	67	20	
	50	9.483 2505	660	9.504 3456	726	0.495 6544	9.978 9050	67	10	
43	0	9.483 3165	659	9.504 4182	726	0.495 5818	9.978 8983	68	0	17
	10	9.483 3824	659	9.504 4908	726	0.495 5092	9.978 8915	67	50	
	20	9.483 4483	658	9.504 5634	727	0.495 4366	9.978 8848	67	40	
	30	9.483 5141	659	9.504 6361	726	0.495 3639	9.978 8781	67	30	
	40	9.483 5800	659	9.504 7087	725	0.495 2913	9.978 8714	68	20	
	50	9.483 6459	658	9.504 7812	726	0.495 2188	9.978 8646	67	10	
44	0	9.483 7117	659	9.504 8538	726	0.495 1462	9.978 8579	67	0	16
	10	9.483 7776	658	9.504 9264	726	0.495 0736	9.978 8512	68	50	
	20	9.483 8434	658	9.504 9990	725	0.495 0010	9.978 8444	67	40	
	30	9.483 9092	658	9.505 0715	725	0.494 9285	9.978 8377	68	30	
	40	9.483 9750	658	9.505 1440	726	0.494 8560	9.978 8309	67	20	
	50	9.484 0408	658	9.505 2166	725	0.494 7834	9.978 8242	67	10	
45	0	9.484 1066	657	9.505 2891	725	0.494 7109	9.978 8175	68	0	15
	10	9.484 1723	658	9.505 3616	725	0.494 6384	9.978 8107	67	50	
	20	9.484 2381	657	9.505 4341	725	0.494 5659	9.978 8040	68	40	
	30	9.484 3038	658	9.505 5066	725	0.494 4934	9.978 7972	67	30	
	40	9.484 3696	657	9.505 5791	725	0.494 4209	9.978 7905	67	20	
	50	9.484 4353	657	9.505 6516	724	0.494 3484	9.978 7838	68	10	
46	0	9.484 5010	657	9.505 7240	725	0.494 2760	9.978 7770	67	0	14
	10	9.484 5667	657	9.505 7965	724	0.494 2035	9.978 7703	68	50	
	20	9.484 6324	657	9.505 8689	724	0.494 1311	9.978 7635	67	40	
	30	9.484 6981	657	9.505 9413	725	0.494 0587	9.978 7568	68	30	
	40	9.484 7638	656	9.506 0138	724	0.493 9862	9.978 7500	67	20	
	50	9.484 8294	657	9.506 0862	724	0.493 9138	9.978 7433	68	10	
47	0	9.484 8951	656	9.506 1586	724	0.493 8414	9.978 7365	67	0	13
	10	9.484 9607	657	9.506 2310	724	0.493 7690	9.978 7298	68	50	
	20	9.485 0264	656	9.506 3034	723	0.493 6966	9.978 7230	68	40	
	30	9.485 0920	656	9.506 3757	724	0.493 6243	9.978 7162	67	30	
	40	9.485 1576	656	9.506 4481	724	0.493 5519	9.978 7095	68	20	
	50	9.485 2232	656	9.506 5205	723	0.493 4795	9.978 7027	67	10	
48	0	9.485 2888	655	9.506 5928	723	0.493 4072	9.978 6960	68	0	12
	10	9.485 3543	656	9.506 6651	724	0.493 3349	9.978 6892	68	50	
	20	9.485 4199	656	9.506 7375	723	0.493 2625	9.978 6824	67	40	
	30	9.485 4855	655	9.506 8098	723	0.493 1902	9.978 6757	68	30	
	40	9.485 5510	655	9.506 8821	723	0.493 1179	9.978 6689	67	20	
	50	9.485 6165	655	9.506 9544	723	0.493 0456	9.978 6622	68	10	
49	0	9.485 6820	656	9.507 0267	722	0.492 9733	9.978 6554	68	0	11
	10	9.485 7476	655	9.507 0989	723	0.492 9011	9.978 6486	67	50	
	20	9.485 8131	654	9.507 1712	723	0.492 8288	9.978 6419	68	40	
	30	9.485 8785	655	9.507 2435	722	0.492 7565	9.978 6351	68	30	
	40	9.485 9440	655	9.507 3157	722	0.492 6843	9.978 6283	68	20	
	50	9.486 0095	654	9.507 3879	723	0.492 6121	9.978 6215	67	10	
50	0	9.486 0749		9.507 4602		0.492 5398	9.978 6148		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

72°

17°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.486 0749	655	9.507 4602	722	0.492 5398	9.978 6148	68	0	10
	10	9.486 1404	654	9.507 5324	722	0.492 4676	9.978 6080	68	50	
	20	9.486 2058	654	9.507 6046	722	0.492 3954	9.978 6012	68	40	
	30	9.486 2712	654	9.507 6768	722	0.492 3232	9.978 5944	67	30	
	40	9.486 3366	654	9.507 7490	722	0.492 2510	9.978 5877	68	20	
	50	9.486 4020	654	9.507 8212	721	0.492 1788	9.978 5809	68	10	
51	0	9.486 4674	654	9.507 8933	722	0.492 1067	9.978 5741	68	0	9
	10	9.486 5328	654	9.507 9655	721	0.492 0345	9.978 5673	68	50	
	20	9.486 5982	653	9.508 0376	722	0.491 9624	9.978 5605	67	40	
	30	9.486 6635	654	9.508 1098	721	0.491 8902	9.978 5538	68	30	
	40	9.486 7289	653	9.508 1819	721	0.491 8181	9.978 5470	68	20	
	50	9.486 7942	653	9.508 2540	721	0.491 7460	9.978 5402	68	10	
52	0	9.486 8595	653	9.508 3261	721	0.491 6739	9.978 5334	68	0	8
	10	9.486 9248	653	9.508 3982	721	0.491 6018	9.978 5266	68	50	
	20	9.486 9901	653	9.508 4703	721	0.491 5297	9.978 5198	68	40	
	30	9.487 0554	653	9.508 5424	721	0.491 4576	9.978 5130	68	30	
	40	9.487 1207	653	9.508 6145	720	0.491 3855	9.978 5062	67	20	
	50	9.487 1860	652	9.508 6865	721	0.491 3135	9.978 4995	68	10	
53	0	9.487 2512	653	9.508 7586	720	0.491 2414	9.978 4927	68	0	7
	10	9.487 3165	652	9.508 8306	721	0.491 1694	9.978 4859	68	50	
	20	9.487 3817	653	9.508 9027	720	0.491 0973	9.978 4791	68	40	
	30	9.487 4470	652	9.508 9747	720	0.491 0253	9.978 4723	68	30	
	40	9.487 5122	652	9.509 0467	720	0.490 9533	9.978 4655	68	20	
	50	9.487 5774	652	9.509 1187	720	0.490 8813	9.978 4587	68	10	
54	0	9.487 6426	652	9.509 1907	720	0.490 8093	9.978 4519	68	0	6
	10	9.487 7078	651	9.509 2627	719	0.490 7373	9.978 4451	68	50	
	20	9.487 7729	652	9.509 3346	720	0.490 6654	9.978 4383	68	40	
	30	9.487 8381	651	9.509 4066	720	0.490 5934	9.978 4315	68	30	
	40	9.487 9032	652	9.509 4786	719	0.490 5214	9.978 4247	68	20	
	50	9.487 9684	651	9.509 5505	719	0.490 4495	9.978 4179	68	10	
55	0	9.488 0335	651	9.509 6224	720	0.490 3776	9.978 4111	69	0	5
	10	9.488 0986	651	9.509 6944	719	0.490 3056	9.978 4042	68	50	
	20	9.488 1637	651	9.509 7663	719	0.490 2337	9.978 3974	68	40	
	30	9.488 2288	651	9.509 8382	719	0.490 1618	9.978 3906	68	30	
	40	9.488 2939	651	9.509 9101	719	0.490 0899	9.978 3838	68	20	
	50	9.488 3590	650	9.509 9820	719	0.490 0180	9.978 3770	68	10	
56	0	9.488 4240	651	9.510 0539	718	0.489 9461	9.978 3702	68	0	4
	10	9.488 4891	650	9.510 1257	719	0.489 8743	9.978 3634	68	50	
	20	9.488 5541	651	9.510 1976	718	0.489 8024	9.978 3566	69	40	
	30	9.488 6192	650	9.510 2694	719	0.489 7306	9.978 3497	68	30	
	40	9.488 6842	650	9.510 3413	718	0.489 6587	9.978 3429	68	20	
	50	9.488 7492	650	9.510 4131	718	0.489 5869	9.978 3361	68	10	
57	0	9.488 8142	650	9.510 4849	718	0.489 5151	9.978 3293	68	0	3
	10	9.488 8792	650	9.510 5567	718	0.489 4433	9.978 3225	69	50	
	20	9.488 9442	649	9.510 6285	718	0.489 3715	9.978 3156	68	40	
	30	9.489 0091	650	9.510 7003	718	0.489 2997	9.978 3088	68	30	
	40	9.489 0741	649	9.510 7721	718	0.489 2279	9.978 3020	68	20	
	50	9.489 1390	650	9.510 8439	717	0.489 1561	9.978 2952	69	10	
58	0	9.489 2040	649	9.510 9156	718	0.489 0844	9.978 2883	68	0	2
	10	9.489 2689	649	9.510 9874	717	0.489 0126	9.978 2815	68	50	
	20	9.489 3338	649	9.511 0591	718	0.488 9409	9.978 2747	68	40	
	30	9.489 3987	649	9.511 1309	717	0.488 8691	9.978 2679	69	30	
	40	9.489 4636	649	9.511 2026	717	0.488 7974	9.978 2610	68	20	
	50	9.489 5285	649	9.511 2743	717	0.488 7257	9.978 2542	68	10	
59	0	9.489 5934	648	9.511 3460	717	0.488 6540	9.978 2474	69	0	1
	10	9.489 6582	649	9.511 4177	717	0.488 5823	9.978 2405	68	50	
	20	9.489 7231	648	9.511 4894	717	0.488 5106	9.978 2337	69	40	
	30	9.489 7879	648	9.511 5611	716	0.488 4389	9.978 2268	68	30	
	40	9.489 8527	649	9.511 6327	717	0.488 3673	9.978 2200	68	20	
	50	9.489 9176	648	9.511 7044	716	0.488 2956	9.978 2132	69	10	
60	0	9.489 9824		9.511 7760		0.488 2240	9.978 2063		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

72°

	722
1	72.2
2	144.4
3	216.6
4	288.8
5	361.0
6	433.2
7	505.4
8	577.6
9	649.8

	719
1	71.9
2	143.8
3	215.7
4	287.6
5	359.5
6	431.4
7	503.3
8	575.2
9	647.1

	716
1	71.6
2	143.2
3	214.8
4	286.4
5	358.0
6	429.6
7	501.2
8	572.8
9	644.4

	652
1	65.2
2	130.4
3	195.6
4	260.8
5	326.0
6	391.2
7	456.4
8	521.6
9	586.8

	649
1	64.9
2	129.8
3	194.7
4	259.6
5	324.5
6	389.4
7	454.3
8	519.2
9	584.1

	68
1	6.8
2	13.6
3	20.4
4	27.2
5	34.0
6	40.8
7	47.6
8	54.4
9	61.2

18°

	717
1	71.7
2	143.4
3	215.1
4	286.8
5	358.5
6	430.2
7	501.9
8	573.6
9	645.3

	714
1	71.4
2	142.8
3	214.2
4	285.6
5	357.0
6	428.4
7	499.8
8	571.2
9	642.6

	711
1	71.1
2	142.2
3	213.3
4	284.4
5	355.5
6	426.6
7	497.7
8	568.8
9	639.9

	647
1	64.7
2	129.4
3	194.1
4	258.8
5	323.5
6	388.2
7	452.9
8	517.6
9	582.3

	644
1	64.4
2	128.8
3	193.2
4	257.6
5	322.0
6	386.4
7	450.8
8	515.2
9	579.6

	69
1	6.9
2	13.8
3	20.7
4	27.6
5	34.5
6	41.4
7	48.3
8	55.2
9	62.1

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	
0	0	9.489 9824	648	9.511 7760	717	0.488 2240	9.978 2063	68	0	60
	10	9.490 0472	647	9.511 8477	716	0.488 1523	9.978 1995	69	50	
	20	9.490 1119	648	9.511 9193	716	0.488 0807	9.978 1926	68	40	
	30	9.490 1767	648	9.511 9909	716	0.488 0091	9.978 1858	68	30	
	40	9.490 2415	647	9.512 0625	716	0.487 9375	9.978 1790	69	20	
	50	9.490 3062	648	9.512 1341	716	0.487 8659	9.978 1721	68	10	
1	0	9.490 3710	647	9.512 2057	716	0.487 7943	9.978 1653	69	0	59
	10	9.490 4357	647	9.512 2773	716	0.487 7227	9.978 1584	68	50	
	20	9.490 5004	647	9.512 3489	715	0.487 6511	9.978 1516	69	40	
	30	9.490 5651	647	9.512 4204	716	0.487 5796	9.978 1447	68	30	
	40	9.490 6298	647	9.512 4920	715	0.487 5080	9.978 1379	69	20	
	50	9.490 6945	647	9.512 5635	716	0.487 4365	9.978 1310	69	10	
2	0	9.490 7592	647	9.512 6351	715	0.487 3649	9.978 1241	68	0	58
	10	9.490 8239	646	9.512 7066	715	0.487 2934	9.978 1173	69	50	
	20	9.490 8885	647	9.512 7781	715	0.487 2219	9.978 1104	68	40	
	30	9.490 9532	646	9.512 8496	715	0.487 1504	9.978 1036	69	30	
	40	9.491 0178	646	9.512 9211	715	0.487 0789	9.978 0967	68	20	
	50	9.491 0824	647	9.512 9926	715	0.487 0074	9.978 0899	69	10	
3	0	9.491 1471	646	9.513 0641	714	0.486 9359	9.978 0830	69	0	57
	10	9.491 2117	646	9.513 1355	715	0.486 8645	9.978 0761	68	50	
	20	9.491 2763	645	9.513 2070	714	0.486 7930	9.978 0693	69	40	
	30	9.491 3408	646	9.513 2784	715	0.486 7216	9.978 0624	69	30	
	40	9.491 4054	646	9.513 3499	714	0.486 6501	9.978 0555	68	20	
	50	9.491 4700	645	9.513 4213	714	0.486 5787	9.978 0487	69	10	
4	0	9.491 5345	646	9.513 4927	714	0.486 5073	9.978 0418	69	0	56
	10	9.491 5991	645	9.513 5641	714	0.486 4359	9.978 0349	68	50	
	20	9.491 6636	645	9.513 6355	714	0.486 3645	9.978 0281	69	40	
	30	9.491 7281	645	9.513 7069	714	0.486 2931	9.978 0212	69	30	
	40	9.491 7926	645	9.513 7783	714	0.486 2217	9.978 0143	68	20	
	50	9.491 8571	645	9.513 8497	713	0.486 1503	9.978 0075	69	10	
5	0	9.491 9216	645	9.513 9210	714	0.486 0790	9.978 0006	69	0	55
	10	9.491 9861	644	9.513 9924	713	0.486 0076	9.977 9937	69	50	
	20	9.492 0505	645	9.514 0637	714	0.485 9363	9.977 9868	69	40	
	30	9.492 1150	644	9.514 1351	713	0.485 8649	9.977 9799	68	30	
	40	9.492 1794	645	9.514 2064	713	0.485 7936	9.977 9731	69	20	
	50	9.492 2439	644	9.514 2777	713	0.485 7223	9.977 9662	69	10	
6	0	9.492 3083	644	9.514 3490	713	0.485 6510	9.977 9593	69	0	54
	10	9.492 3727	644	9.514 4203	713	0.485 5797	9.977 9524	69	50	
	20	9.492 4371	644	9.514 4916	713	0.485 5084	9.977 9455	68	40	
	30	9.492 5015	644	9.514 5629	712	0.485 4371	9.977 9387	69	30	
	40	9.492 5659	644	9.514 6341	713	0.485 3659	9.977 9318	69	20	
	50	9.492 6303	643	9.514 7054	712	0.485 2946	9.977 9249	69	10	
7	0	9.492 6946	644	9.514 7766	713	0.485 2234	9.977 9180	69	0	53
	10	9.492 7590	643	9.514 8479	712	0.485 1521	9.977 9111	69	50	
	20	9.492 8233	643	9.514 9191	712	0.485 0809	9.977 9042	69	40	
	30	9.492 8876	644	9.514 9903	712	0.485 0097	9.977 8973	69	30	
	40	9.492 9520	643	9.515 0615	712	0.484 9385	9.977 8904	69	20	
	50	9.493 0163	643	9.515 1327	712	0.484 8673	9.977 8835	69	10	
8	0	9.493 0806	643	9.515 2039	712	0.484 7961	9.977 8766	69	0	52
	10	9.493 1449	642	9.515 2751	712	0.484 7249	9.977 8697	68	50	
	20	9.493 2091	643	9.515 3463	711	0.484 6537	9.977 8629	69	40	
	30	9.493 2734	642	9.515 4174	712	0.484 5826	9.977 8560	69	30	
	40	9.493 3376	643	9.515 4886	711	0.484 5114	9.977 8491	69	20	
	50	9.493 4019	642	9.515 5597	712	0.484 4403	9.977 8422	69	10	
9	0	9.493 4661	643	9.515 6309	711	0.484 3691	9.977 8353	70	0	51
	10	9.493 5304	642	9.515 7020	711	0.484 2980	9.977 8283	69	50	
	20	9.493 5946	642	9.515 7731	711	0.484 2269	9.977 8214	69	40	
	30	9.493 6588	642	9.515 8442	711	0.484 1558	9.977 8145	69	30	
	40	9.493 7230	641	9.515 9153	711	0.484 0847	9.977 8076	69	20	
	50	9.493 7871	642	9.515 9864	711	0.484 0136	9.977 8007	69	10	
10	0	9.493 8513		9.516 0575		0.483 9425	9.977 7938		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

71°

18°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.493 8513	642	9.516 0575	711	0.483 9425	9.977 7938	69	0	50
	10	9.493 9155	641	9.516 1286	710	0.483 8714	9.977 7869	69	50	
	20	9.493 9796	642	9.516 1996	711	0.483 8004	9.977 7800	69	40	
	30	9.494 0438	641	9.516 2707	710	0.483 7293	9.977 7731	69	30	
	40	9.494 1079	641	9.516 3417	710	0.483 6583	9.977 7662	69	20	
	50	9.494 1720	641	9.516 4127	711	0.483 5873	9.977 7593	70	10	
11	0	9.494 2361	641	9.516 4838	710	0.483 5162	9.977 7523	69	0	49
	10	9.494 3002	641	9.516 5548	710	0.483 4452	9.977 7454	69	50	
	20	9.494 3643	641	9.516 6258	710	0.483 3742	9.977 7385	69	40	
	30	9.494 4284	640	9.516 6968	710	0.483 3032	9.977 7316	69	30	
	40	9.494 4924	641	9.516 7678	709	0.483 2322	9.977 7247	69	20	
	50	9.494 5565	640	9.516 8387	710	0.483 1613	9.977 7178	70	10	
12	0	9.494 6205	641	9.516 9097	710	0.483 0903	9.977 7108	69	0	48
	10	9.494 6846	640	9.516 9807	709	0.483 0193	9.977 7039	69	50	
	20	9.494 7486	640	9.517 0516	710	0.482 9484	9.977 6970	69	40	
	30	9.494 8126	640	9.517 1226	709	0.482 8774	9.977 6901	70	30	
	40	9.494 8766	640	9.517 1935	709	0.482 8065	9.977 6831	69	20	
	50	9.494 9406	640	9.517 2644	709	0.482 7356	9.977 6762	69	10	
13	0	9.495 0046	640	9.517 3353	709	0.482 6647	9.977 6693	70	0	47
	10	9.495 0686	639	9.517 4062	709	0.482 5938	9.977 6623	69	50	
	20	9.495 1325	640	9.517 4771	709	0.482 5229	9.977 6554	69	40	
	30	9.495 1965	639	9.517 5480	709	0.482 4520	9.977 6485	70	30	
	40	9.495 2604	639	9.517 6189	708	0.482 3811	9.977 6415	69	20	
	50	9.495 3243	640	9.517 6897	709	0.482 3103	9.977 6346	69	10	
14	0	9.495 3883	639	9.517 7606	708	0.482 2394	9.977 6277	70	0	46
	10	9.495 4522	639	9.517 8314	709	0.482 1686	9.977 6207	69	50	
	20	9.495 5161	639	9.517 9023	708	0.482 0977	9.977 6138	69	40	
	30	9.495 5800	638	9.517 9731	708	0.482 0269	9.977 6069	70	30	
	40	9.495 6438	639	9.518 0439	708	0.481 9561	9.977 5999	69	20	
	50	9.495 7077	639	9.518 1147	708	0.481 8853	9.977 5930	70	10	
15	0	9.495 7716	638	9.518 1855	708	0.481 8145	9.977 5860	69	0	45
	10	9.495 8354	638	9.518 2563	708	0.481 7437	9.977 5791	69	50	
	20	9.495 8992	639	9.518 3271	708	0.481 6729	9.977 5722	70	40	
	30	9.495 9631	638	9.518 3979	707	0.481 6021	9.977 5652	69	30	
	40	9.496 0269	638	9.518 4686	708	0.481 5314	9.977 5583	70	20	
	50	9.496 0907	638	9.518 5394	707	0.481 4606	9.977 5513	69	10	
16	0	9.496 1545	638	9.518 6101	708	0.481 3899	9.977 5444	70	0	44
	10	9.496 2183	637	9.518 6809	707	0.481 3191	9.977 5374	69	50	
	20	9.496 2820	638	9.518 7516	707	0.481 2484	9.977 5305	70	40	
	30	9.496 3458	638	9.518 8223	707	0.481 1777	9.977 5235	69	30	
	40	9.496 4096	637	9.518 8930	707	0.481 1070	9.977 5166	70	20	
	50	9.496 4733	637	9.518 9637	707	0.481 0363	9.977 5096	70	10	
17	0	9.496 5370	638	9.519 0344	707	0.480 9656	9.977 5026	69	0	43
	10	9.496 6008	637	9.519 1051	706	0.480 8949	9.977 4957	70	50	
	20	9.496 6645	637	9.519 1757	707	0.480 8243	9.977 4887	69	40	
	30	9.496 7282	637	9.519 2464	707	0.480 7536	9.977 4818	70	30	
	40	9.496 7919	636	9.519 3171	706	0.480 6829	9.977 4748	70	20	
	50	9.496 8555	637	9.519 3877	706	0.480 6123	9.977 4678	69	10	
18	0	9.496 9192	637	9.519 4583	707	0.480 5417	9.977 4609	70	0	42
	10	9.496 9829	636	9.519 5290	706	0.480 4710	9.977 4539	69	50	
	20	9.497 0465	637	9.519 5996	706	0.480 4004	9.977 4470	70	40	
	30	9.497 1102	636	9.519 6702	706	0.480 3298	9.977 4400	70	30	
	40	9.497 1738	636	9.519 7408	706	0.480 2592	9.977 4330	69	20	
	50	9.497 2374	636	9.519 8114	705	0.480 1886	9.977 4261	70	10	
19	0	9.497 3010	636	9.519 8819	706	0.480 1181	9.977 4191	70	0	41
	10	9.497 3646	636	9.519 9525	706	0.480 0475	9.977 4121	70	50	
	20	9.497 4282	636	9.520 0231	705	0.479 9769	9.977 4051	69	40	
	30	9.497 4918	635	9.520 0936	706	0.479 9064	9.977 3982	70	30	
	40	9.497 5553	636	9.520 1642	705	0.479 8358	9.977 3912	70	20	
	50	9.497 6189	635	9.520 2347	705	0.479 7653	9.977 3842	70	10	
20	0	9.497 6824		9.520 3052		0.479 6948	9.977 3772		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

71°

	708
1	70.8
2	141.6
3	212.4
4	283.2
5	354.0
6	424.8
7	495.6
8	566.4
9	637.2

	705
1	70.5
2	141.0
3	211.5
4	282.0
5	352.5
6	423.0
7	493.5
8	564.0
9	634.5

	641
1	64.1
2	128.2
3	192.3
4	256.4
5	320.5
6	384.6
7	448.7
8	512.8
9	576.9

	638
1	63.8
2	127.6
3	191.4
4	255.2
5	319.0
6	382.8
7	446.
8	510.4
9	574.2

	635
1	63.5
2	127.0
3	190.5
4	254.0
5	317.5
6	381.0
7	444.5
8	508.0
9	571.5

	70
1	7.0
2	14.0
3	21.0
4	28.0
5	35.0
6	42.0
7	49.0
8	56.0
9	63.0

18°

705	
1	70.5
2	141.0
3	211.5
4	282.0
5	352.5
6	423.0
7	493.5
8	564.0
9	634.5

702	
1	70.2
2	140.4
3	210.6
4	280.8
5	351.0
6	421.2
7	491.4
8	561.6
9	631.8

636	
1	63.6
2	127.2
3	190.8
4	254.4
5	318.0
6	381.6
7	445.2
8	508.8
9	572.4

633	
1	63.3
2	126.6
3	189.9
4	253.2
5	316.5
6	379.8
7	443.1
8	506.4
9	569.7

630	
1	63.0
2	126.0
3	189.0
4	252.0
5	315.0
6	378.0
7	441.0
8	504.0
9	567.0

70	
1	7.0
2	14.0
3	21.0
4	28.0
5	35.0
6	42.0
7	49.0
8	56.0
9	63.0

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.497 6824	636	9.520 3052	705	0.479 6948	9.977 3772	69	0	40
	10	9.497 7460	635	9.520 3757	705	0.479 6243	9.977 3703	70	50	
	20	9.497 8095	635	9.520 4462	705	0.479 5538	9.977 3633	70	40	
	30	9.497 8730	635	9.520 5167	705	0.479 4833	9.977 3563	70	30	
	40	9.497 9365	635	9.520 5872	705	0.479 4128	9.977 3493	70	20	
	50	9.498 0000	635	9.520 6577	705	0.479 3423	9.977 3423	69	10	
21	0	9.498 0635	635	9.520 7282	704	0.479 2718	9.977 3354	70	0	39
	10	9.498 1270	634	9.520 7986	705	0.479 2014	9.977 3284	70	50	
	20	9.498 1904	635	9.520 8691	704	0.479 1309	9.977 3214	70	40	
	30	9.498 2539	634	9.520 9395	704	0.479 0605	9.977 3144	70	30	
	40	9.498 3173	635	9.521 0099	705	0.478 9901	9.977 3074	70	20	
	50	9.498 3808	634	9.521 0804	704	0.478 9196	9.977 3004	70	10	
22	0	9.498 4442	634	9.521 1508	704	0.478 8492	9.977 2934	70	0	38
	10	9.498 5076	634	9.521 2212	704	0.478 7788	9.977 2864	69	50	
	20	9.498 5710	634	9.521 2916	703	0.478 7084	9.977 2795	70	40	
	30	9.498 6344	634	9.521 3619	704	0.478 6381	9.977 2725	70	30	
	40	9.498 6978	634	9.521 4323	704	0.478 5677	9.977 2655	70	20	
	50	9.498 7612	633	9.521 5027	703	0.478 4973	9.977 2585	70	10	
23	0	9.498 8245	634	9.521 5730	704	0.478 4270	9.977 2515	70	0	37
	10	9.498 8879	633	9.521 6434	703	0.478 3566	9.977 2445	70	50	
	20	9.498 9512	633	9.521 7137	704	0.478 2863	9.977 2375	70	40	
	30	9.499 0145	634	9.521 7841	703	0.478 2159	9.977 2305	70	30	
	40	9.499 0779	633	9.521 8544	703	0.478 1456	9.977 2235	70	20	
	50	9.499 1412	633	9.521 9247	703	0.478 0753	9.977 2165	70	10	
24	0	9.499 2045	633	9.521 9950	703	0.478 0050	9.977 2095	70	0	36
	10	9.499 2678	632	9.522 0653	703	0.477 9347	9.977 2025	70	50	
	20	9.499 3310	633	9.522 1356	703	0.477 8644	9.977 1955	71	40	
	30	9.499 3943	633	9.522 2059	702	0.477 7941	9.977 1884	70	30	
	40	9.499 4576	632	9.522 2761	703	0.477 7239	9.977 1814	70	20	
	50	9.499 5208	632	9.522 3464	702	0.477 6536	9.977 1744	70	10	
25	0	9.499 5840	633	9.522 4166	703	0.477 5834	9.977 1674	70	0	35
	10	9.499 6473	632	9.522 4869	702	0.477 5131	9.977 1604	70	50	
	20	9.499 7105	632	9.522 5571	702	0.477 4429	9.977 1534	70	40	
	30	9.499 7737	632	9.522 6273	702	0.477 3727	9.977 1464	70	30	
	40	9.499 8369	632	9.522 6975	702	0.477 3025	9.977 1394	70	20	
	50	9.499 9001	632	9.522 7677	702	0.477 2323	9.977 1324	71	10	
26	0	9.499 9633	631	9.522 8379	702	0.477 1621	9.977 1253	70	0	34
	10	9.500 0264	632	9.522 9081	702	0.477 0919	9.977 1183	70	50	
	20	9.500 0896	631	9.522 9783	702	0.477 0217	9.977 1113	70	40	
	30	9.500 1527	632	9.523 0485	701	0.476 9515	9.977 1043	70	30	
	40	9.500 2159	631	9.523 1186	702	0.476 8814	9.977 0973	71	20	
	50	9.500 2790	631	9.523 1888	701	0.476 8112	9.977 0902	70	10	
27	0	9.500 3421	631	9.523 2589	701	0.476 7411	9.977 0832	70	0	33
	10	9.500 4052	631	9.523 3290	702	0.476 6710	9.977 0762	70	50	
	20	9.500 4683	631	9.523 3992	701	0.476 6008	9.977 0692	71	40	
	30	9.500 5314	631	9.523 4693	701	0.476 5307	9.977 0621	70	30	
	40	9.500 5945	630	9.523 5394	701	0.476 4606	9.977 0551	70	20	
	50	9.500 6575	631	9.523 6095	700	0.476 3905	9.977 0481	71	10	
28	0	9.500 7206	630	9.523 6795	701	0.476 3205	9.977 0410	70	0	32
	10	9.500 7836	631	9.523 7496	701	0.476 2504	9.977 0340	70	50	
	20	9.500 8467	630	9.523 8197	700	0.476 1803	9.977 0270	71	40	
	30	9.500 9097	630	9.523 8897	701	0.476 1103	9.977 0199	70	30	
	40	9.500 9727	630	9.523 9598	700	0.476 0402	9.977 0129	70	20	
	50	9.501 0357	630	9.524 0298	701	0.475 9702	9.977 0059	71	10	
29	0	9.501 0987	630	9.524 0999	700	0.475 9001	9.976 9988	70	0	31
	10	9.501 1617	630	9.524 1699	700	0.475 8301	9.976 9918	70	50	
	20	9.501 2247	629	9.524 2399	700	0.475 7601	9.976 9848	71	40	
	30	9.501 2876	630	9.524 3099	700	0.475 6901	9.976 9777	70	30	
	40	9.501 3506	629	9.524 3799	700	0.475 6201	9.976 9707	71	20	
	50	9.501 4135	629	9.524 4499	700	0.475 5501	9.976 9636	70	10	
30	0	9.501 4764		9.524 5199		0.475 4801	9.976 9566		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

71°

18°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.501 4764	630	9.524 5199	699	0.475 4801	9.976 9566	71	0	30
	10	9.501 5394	629	9.524 5898	700	0.475 4102	9.976 9495	70	50	
	20	9.501 6023	629	9.524 6598	699	0.475 3402	9.976 9425	71	40	
	30	9.501 6652	629	9.524 7297	700	0.475 2703	9.976 9354	70	30	
	40	9.501 7281	629	9.524 7997	699	0.475 2003	9.976 9284	71	20	
	50	9.501 7910	628	9.524 8696	699	0.475 1304	9.976 9213	70	10	
31	0	9.501 8538	629	9.524 9395	699	0.475 0605	9.976 9143	71	0	29
	10	9.501 9167	628	9.525 0094	700	0.474 9906	9.976 9072	70	50	
	20	9.501 9795	629	9.525 0794	698	0.474 9206	9.976 9002	71	40	
	30	9.502 0424	628	9.525 1492	699	0.474 8508	9.976 8931	70	30	
	40	9.502 1052	628	9.525 2191	699	0.474 7809	9.976 8861	71	20	
	50	9.502 1680	628	9.525 2890	699	0.474 7110	9.976 8790	70	10	
32	0	9.502 2308	628	9.525 3589	698	0.474 6411	9.976 8720	71	0	28
	10	9.502 2936	628	9.525 4287	699	0.474 5713	9.976 8649	71	50	
	20	9.502 3564	628	9.525 4986	698	0.474 5014	9.976 8578	70	40	
	30	9.502 4192	628	9.525 5684	699	0.474 4316	9.976 8508	71	30	
	40	9.502 4820	627	9.525 6383	698	0.474 3617	9.976 8437	70	20	
	50	9.502 5447	628	9.525 7081	698	0.474 2919	9.976 8367	71	10	
33	0	9.502 6075	627	9.525 7779	698	0.474 2221	9.976 8296	71	0	27
	10	9.502 6702	628	9.525 8477	698	0.474 1523	9.976 8225	70	50	
	20	9.502 7330	627	9.525 9175	698	0.474 0825	9.976 8155	71	40	
	30	9.502 7957	627	9.525 9873	698	0.474 0127	9.976 8084	71	30	
	40	9.502 8584	627	9.526 0571	697	0.473 9429	9.976 8013	71	20	
	50	9.502 9211	627	9.526 1268	698	0.473 8732	9.976 7942	70	10	
34	0	9.502 9838	627	9.526 1966	698	0.473 8034	9.976 7872	71	0	26
	10	9.503 0465	626	9.526 2664	697	0.473 7336	9.976 7801	71	50	
	20	9.503 1091	627	9.526 3361	697	0.473 6639	9.976 7730	70	40	
	30	9.503 1718	626	9.526 4058	698	0.473 5942	9.976 7660	71	30	
	40	9.503 2344	627	9.526 4756	697	0.473 5244	9.976 7589	71	20	
	50	9.503 2971	626	9.526 5453	697	0.473 4547	9.976 7518	71	10	
35	0	9.503 3597	626	9.526 6150	697	0.473 3850	9.976 7447	71	0	25
	10	9.503 4223	626	9.526 6847	697	0.473 3153	9.976 7376	70	50	
	20	9.503 4849	626	9.526 7544	697	0.473 2456	9.976 7306	71	40	
	30	9.503 5475	626	9.526 8241	696	0.473 1759	9.976 7235	71	30	
	40	9.503 6101	626	9.526 8937	697	0.473 1063	9.976 7164	71	20	
	50	9.503 6727	626	9.526 9634	697	0.473 0366	9.976 7093	71	10	
36	0	9.503 7353	625	9.527 0331	696	0.472 9669	9.976 7022	71	0	24
	10	9.503 7978	626	9.527 1027	696	0.472 8973	9.976 6951	70	50	
	20	9.503 8604	625	9.527 1723	697	0.472 8277	9.976 6881	71	40	
	30	9.503 9229	626	9.527 2420	696	0.472 7580	9.976 6810	71	30	
	40	9.503 9855	625	9.527 3116	696	0.472 6884	9.976 6739	71	20	
	50	9.504 0480	625	9.527 3812	696	0.472 6188	9.976 6668	71	10	
37	0	9.504 1105	625	9.527 4508	696	0.472 5492	9.976 6597	71	0	23
	10	9.504 1730	625	9.527 5204	696	0.472 4796	9.976 6526	71	50	
	20	9.504 2355	625	9.527 5900	695	0.472 4100	9.976 6455	71	40	
	30	9.504 2980	624	9.527 6595	696	0.472 3405	9.976 6384	71	30	
	40	9.504 3604	625	9.527 7291	696	0.472 2709	9.976 6313	71	20	
	50	9.504 4229	624	9.527 7987	695	0.472 2013	9.976 6242	71	10	
38	0	9.504 4853	625	9.527 8682	696	0.472 1318	9.976 6171	71	0	22
	10	9.504 5478	624	9.527 9378	695	0.472 0622	9.976 6100	71	50	
	20	9.504 6102	624	9.528 0073	695	0.471 9927	9.976 6029	71	40	
	30	9.504 6726	624	9.528 0768	695	0.471 9232	9.976 5958	71	30	
	40	9.504 7350	624	9.528 1463	695	0.471 8537	9.976 5887	71	20	
	50	9.504 7974	624	9.528 2158	695	0.471 7842	9.976 5816	71	10	
39	0	9.504 8598	624	9.528 2853	695	0.471 7147	9.976 5745	71	0	21
	10	9.504 9222	624	9.528 3548	695	0.471 6452	9.976 5674	71	50	
	20	9.504 9846	623	9.528 4243	694	0.471 5757	9.976 5603	71	40	
	30	9.505 0469	624	9.528 4937	695	0.471 5063	9.976 5532	71	30	
	40	9.505 1093	623	9.528 5632	695	0.471 4368	9.976 5461	71	20	
	50	9.505 1716	623	9.528 6327	694	0.471 3673	9.976 5390	72	10	
40	0	9.505 2339		9.528 7021		0.471 2979	9.976 5318		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

71°

	699
1	69.9
2	139.8
3	209.7
4	279.6
5	349.5
6	419.4
7	489.3
8	559.2
9	629.1

	697
1	69.7
2	139.4
3	209.1
4	278.8
5	348.5
6	418.2
7	487.9
8	557.6
9	627.3

	695
1	69.5
2	139.0
3	208.5
4	278.0
5	347.5
6	417.0
7	486.5
8	556.0
9	625.5

	627
1	62.7
2	125.4
3	188.1
4	250.8
5	313.5
6	376.2
7	438.9
8	501.6
9	564.3

	624
1	62.4
2	124.8
3	187.2
4	249.6
5	312.0
6	374.4
7	436.8
8	499.2
9	561.6

	71
1	7.1
2	14.2
3	21.3
4	28.4
5	35.5
6	42.6
7	49.7
8	56.8
9	63.9

18°

694	
1	69.4
2	138.8
3	208.2
4	277.6
5	347.0
6	416.4
7	485.8
8	555.2
9	624.6

692	
1	69.2
2	138.4
3	207.6
4	276.8
5	346.0
6	415.2
7	484.4
8	553.6
9	622.8

623	
1	62.3
2	124.6
3	186.9
4	249.2
5	311.5
6	373.8
7	436.1
8	498.4
9	560.7

619	
1	61.9
2	123.8
3	185.7
4	247.6
5	309.5
6	371.4
7	433.3
8	495.2
9	557.1

617	
1	61.7
2	123.4
3	185.1
4	246.8
5	308.5
6	370.2
7	431.9
8	493.6
9	555.3

71	
1	7.1
2	14.2
3	21.3
4	28.4
5	35.5
6	42.6
7	49.7
8	56.8
9	63.9

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.505 2339	624	9.528 7021	694	0.471 2979	9.976 5318	71	0	20
	10	9.505 2963	623	9.528 7715	695	0.471 2285	9.976 5247	71	50	
	20	9.505 3586	623	9.528 8410	694	0.471 1590	9.976 5176	71	40	
	30	9.505 4209	623	9.528 9104	694	0.471 0896	9.976 5105	71	30	
	40	9.505 4832	622	9.528 9798	694	0.471 0202	9.976 5034	71	20	
	50	9.505 5454	623	9.529 0492	694	0.470 9508	9.976 4963	72	10	
41	0	9.505 6077	623	9.529 1186	693	0.470 8814	9.976 4891	71	0	19
	10	9.505 6700	622	9.529 1879	694	0.470 8121	9.976 4820	71	50	
	20	9.505 7322	623	9.529 2573	694	0.470 7427	9.976 4749	71	40	
	30	9.505 7945	622	9.529 3267	693	0.470 6733	9.976 4678	71	30	
	40	9.505 8567	622	9.529 3960	694	0.470 6040	9.976 4607	72	20	
	50	9.505 9189	622	9.529 4654	693	0.470 5346	9.976 4535	71	10	
42	0	9.505 9811	622	9.529 5347	693	0.470 4653	9.976 4464	71	0	18
	10	9.506 0433	622	9.529 6040	694	0.470 3960	9.976 4393	72	50	
	20	9.506 1055	622	9.529 6734	693	0.470 3266	9.976 4321	71	40	
	30	9.506 1677	622	9.529 7427	693	0.470 2573	9.976 4250	71	30	
	40	9.506 2299	621	9.529 8120	693	0.470 1880	9.976 4179	71	20	
	50	9.506 2920	622	9.529 8813	692	0.470 1187	9.976 4108	72	10	
43	0	9.506 3542	621	9.529 9505	693	0.470 0495	9.976 4036	71	0	17
	10	9.506 4163	621	9.530 0198	693	0.469 9802	9.976 3965	71	50	
	20	9.506 4784	622	9.530 0891	692	0.469 9109	9.976 3894	72	40	
	30	9.506 5406	621	9.530 1583	693	0.469 8417	9.976 3822	71	30	
	40	9.506 6027	621	9.530 2276	692	0.469 7724	9.976 3751	72	20	
	50	9.506 6648	621	9.530 2968	693	0.469 7032	9.976 3679	71	10	
44	0	9.506 7269	620	9.530 3661	692	0.469 6339	9.976 3608	71	0	16
	10	9.506 7889	621	9.530 4353	692	0.469 5647	9.976 3537	72	50	
	20	9.506 8510	621	9.530 5045	692	0.469 4955	9.976 3465	71	40	
	30	9.506 9131	620	9.530 5737	692	0.469 4263	9.976 3394	72	30	
	40	9.506 9751	621	9.530 6429	692	0.469 3571	9.976 3322	71	20	
	50	9.507 0372	620	9.530 7121	692	0.469 2879	9.976 3251	72	10	
45	0	9.507 0992	620	9.530 7813	691	0.469 2187	9.976 3179	71	0	15
	10	9.507 1612	620	9.530 8504	692	0.469 1496	9.976 3108	72	50	
	20	9.507 2232	620	9.530 9196	691	0.469 0804	9.976 3036	71	40	
	30	9.507 2852	620	9.530 9887	692	0.469 0113	9.976 2965	72	30	
	40	9.507 3472	620	9.531 0579	691	0.468 9421	9.976 2893	71	20	
	50	9.507 4092	620	9.531 1270	691	0.468 8730	9.976 2822	72	10	
46	0	9.507 4712	619	9.531 1961	692	0.468 8039	9.976 2750	71	0	14
	10	9.507 5331	620	9.531 2653	691	0.468 7347	9.976 2679	72	50	
	20	9.507 5951	619	9.531 3344	691	0.468 6656	9.976 2607	71	40	
	30	9.507 6570	620	9.531 4035	691	0.468 5965	9.976 2536	72	30	
	40	9.507 7190	619	9.531 4726	690	0.468 5274	9.976 2464	72	20	
	50	9.507 7809	619	9.531 5416	691	0.468 4584	9.976 2392	71	10	
47	0	9.507 8428	619	9.531 6107	691	0.468 3893	9.976 2321	72	0	13
	10	9.507 9047	619	9.531 6798	690	0.468 3202	9.976 2249	71	50	
	20	9.507 9666	619	9.531 7488	691	0.468 2512	9.976 2178	72	40	
	30	9.508 0285	619	9.531 8179	690	0.468 1821	9.976 2106	72	30	
	40	9.508 0904	618	9.531 8869	691	0.468 1131	9.976 2034	71	20	
	50	9.508 1522	619	9.531 9560	690	0.468 0440	9.976 1963	72	10	
48	0	9.508 2141	618	9.532 0250	690	0.467 9750	9.976 1891	72	0	12
	10	9.508 2759	619	9.532 0940	690	0.467 9060	9.976 1819	71	50	
	20	9.508 3378	618	9.532 1630	690	0.467 8370	9.976 1748	72	40	
	30	9.508 3996	618	9.532 2320	690	0.467 7680	9.976 1676	72	30	
	40	9.508 4614	618	9.532 3010	690	0.467 6990	9.976 1604	72	20	
	50	9.508 5232	618	9.532 3700	689	0.467 6300	9.976 1532	71	10	
49	0	9.508 5850	618	9.532 4389	690	0.467 5611	9.976 1461	72	0	11
	10	9.508 6468	618	9.532 5079	689	0.467 4921	9.976 1389	72	50	
	20	9.508 7086	617	9.532 5768	690	0.467 4232	9.976 1317	72	40	
	30	9.508 7703	618	9.532 6458	689	0.467 3542	9.976 1245	71	30	
	40	9.508 8321	617	9.532 7147	689	0.467 2853	9.976 1174	72	20	
	50	9.508 8938	618	9.532 7836	690	0.467 2164	9.976 1102	72	10	
50	0	9.508 9556		9.532 8526		0.467 1474	9.976 1030		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

71°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.508 9556	617	9.532 8526	689	0.467 1474	9.976 1030	72	0	10
	10	9.509 0173	617	9.532 9215	689	0.467 0785	9.976 0958	72	50	
	20	9.509 0790	617	9.532 9904	689	0.467 0096	9.976 0886	71	40	
	30	9.509 1407	617	9.533 0593	688	0.466 9407	9.976 0815	72	30	
	40	9.509 2024	617	9.533 1281	689	0.466 8719	9.976 0743	72	20	
	50	9.509 2641	617	9.533 1970	689	0.466 8030	9.976 0671	72	10	
51	0	9.509 3258	616	9.533 2659	688	0.466 7341	9.976 0599	72	0	9
	10	9.509 3874	617	9.533 3347	689	0.466 6653	9.976 0527	72	50	
	20	9.509 4491	616	9.533 4036	688	0.466 5964	9.976 0455	72	40	
	30	9.509 5107	617	9.533 4724	689	0.466 5276	9.976 0383	72	30	
	40	9.509 5724	616	9.533 5413	688	0.466 4587	9.976 0311	72	20	
	50	9.509 6340	616	9.533 6101	688	0.466 3899	9.976 0239	72	10	
52	0	9.509 6956	616	9.533 6789	688	0.466 3211	9.976 0167	72	0	8
	10	9.509 7572	616	9.533 7477	688	0.466 2523	9.976 0095	71	50	
	20	9.509 8188	616	9.533 8165	688	0.466 1835	9.976 0024	72	40	
	30	9.509 8804	616	9.533 8853	688	0.466 1147	9.975 9952	72	30	
	40	9.509 9420	616	9.533 9541	687	0.466 0459	9.975 9880	72	20	
	50	9.510 0036	615	9.534 0228	688	0.465 9772	9.975 9808	72	10	
53	0	9.510 0651	616	9.534 0916	687	0.465 9084	9.975 9736	72	0	7
	10	9.510 1267	615	9.534 1603	688	0.465 8397	9.975 9664	73	50	
	20	9.510 1882	616	9.534 2291	687	0.465 7709	9.975 9591	72	40	
	30	9.510 2498	615	9.534 2978	688	0.465 7022	9.975 9519	72	30	
	40	9.510 3113	615	9.534 3666	687	0.465 6334	9.975 9447	72	20	
	50	9.510 3728	615	9.534 4353	687	0.465 5647	9.975 9375	72	10	
54	0	9.510 4343	615	9.534 5040	687	0.465 4960	9.975 9303	72	0	6
	10	9.510 4958	615	9.534 5727	687	0.465 4273	9.975 9231	72	50	
	20	9.510 5573	614	9.534 6414	687	0.465 3586	9.975 9159	72	40	
	30	9.510 6187	615	9.534 7101	686	0.465 2899	9.975 9087	72	30	
	40	9.510 6802	615	9.534 7787	687	0.465 2213	9.975 9015	72	20	
	50	9.510 7417	614	9.534 8474	687	0.465 1526	9.975 8943	73	10	
55	0	9.510 8031	614	9.534 9161	686	0.465 0839	9.975 8870	72	0	5
	10	9.510 8645	615	9.534 9847	687	0.465 0153	9.975 8798	72	50	
	20	9.510 9260	614	9.535 0534	686	0.464 9466	9.975 8726	72	40	
	30	9.510 9874	614	9.535 1220	686	0.464 8780	9.975 8654	72	30	
	40	9.511 0488	614	9.535 1906	686	0.464 8094	9.975 8582	72	20	
	50	9.511 1102	614	9.535 2592	686	0.464 7408	9.975 8510	73	10	
56	0	9.511 1716	613	9.535 3278	686	0.464 6722	9.975 8437	72	0	4
	10	9.511 2329	614	9.535 3964	686	0.464 6036	9.975 8365	72	50	
	20	9.511 2943	614	9.535 4650	686	0.464 5350	9.975 8293	72	40	
	30	9.511 3557	613	9.535 5336	686	0.464 4664	9.975 8221	73	30	
	40	9.511 4170	614	9.535 6022	685	0.464 3978	9.975 8148	72	20	
	50	9.511 4784	613	9.535 6707	686	0.464 3293	9.975 8076	72	10	
57	0	9.511 5397	613	9.535 7393	685	0.464 2607	9.975 8004	73	0	3
	10	9.511 6010	613	9.535 8078	686	0.464 1922	9.975 7931	72	50	
	20	9.511 6623	613	9.535 8764	685	0.464 1236	9.975 7859	72	40	
	30	9.511 7236	613	9.535 9449	685	0.464 0551	9.975 7787	72	30	
	40	9.511 7849	613	9.536 0134	686	0.463 9866	9.975 7715	73	20	
	50	9.511 8462	612	9.536 0820	685	0.463 9180	9.975 7642	72	10	
58	0	9.511 9074	613	9.536 1505	685	0.463 8495	9.975 7570	73	0	2
	10	9.511 9687	612	9.536 2190	684	0.463 7810	9.975 7497	72	50	
	20	9.512 0299	613	9.536 2874	685	0.463 7126	9.975 7425	72	40	
	30	9.512 0912	612	9.536 3559	685	0.463 6441	9.975 7353	73	30	
	40	9.512 1524	612	9.536 4244	685	0.463 5756	9.975 7280	72	20	
	50	9.512 2136	613	9.536 4929	684	0.463 5071	9.975 7208	73	10	
59	0	9.512 2749	612	9.536 5613	685	0.463 4387	9.975 7135	72	0	1
	10	9.512 3361	611	9.536 6298	684	0.463 3702	9.975 7063	72	50	
	20	9.512 3972	612	9.536 6982	684	0.463 3018	9.975 6991	73	40	
	30	9.512 4584	612	9.536 7666	684	0.463 2334	9.975 6918	72	30	
	40	9.512 5196	612	9.536 8350	684	0.463 1650	9.975 6846	73	20	
	50	9.512 5808	611	9.536 9034	685	0.463 0966	9.975 6773	72	10	
60	0	9.512 6419		9.536 9719		0.463 0281	9.975 6701		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

689	
1	68.9
2	137.8
3	206.7
4	275.6
5	344.5
6	413.4
7	482.3
8	551.2
9	620.1

687	
1	68.7
2	137.4
3	206.1
4	274.8
5	343.5
6	412.2
7	480.9
8	549.6
9	618.3

685	
1	68.5
2	137.0
3	205.5
4	274.0
5	342.5
6	411.0
7	479.5
8	548.0
9	616.5

614	
1	61.4
2	122.8
3	184.2
4	245.6
5	307.0
6	368.4
7	429.8
8	491.2
9	552.6

612	
1	61.2
2	122.4
3	183.6
4	244.8
5	306.0
6	367.2
7	428.4
8	489.6
9	550.8

72	
1	7.2
2	14.4
3	21.6
4	28.8
5	36.0
6	43.2
7	50.4
8	57.6
9	64.8

19°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.512 6419	612	9.536 9719	683	0.463 0281	9.975 6701	73	0	60
	10	9.512 7031	611	9.537 0402	684	0.462 9598	9.975 6628	72	50	
	20	9.512 7642	611	9.537 1086	684	0.462 8914	9.975 6556	73	40	
	30	9.512 8253	611	9.537 1770	684	0.462 8230	9.975 6483	72	30	
	40	9.512 8864	611	9.537 2454	683	0.462 7546	9.975 6411	73	20	
	50	9.512 9475	611	9.537 3137	684	0.462 6863	9.975 6338	73	10	
1	0	9.513 0086	611	9.537 3821	683	0.462 6179	9.975 6265	72	0	59
	10	9.513 0697	611	9.537 4504	684	0.462 5496	9.975 6193	73	50	
	20	9.513 1308	611	9.537 5188	683	0.462 4812	9.975 6120	72	40	
	30	9.513 1919	610	9.537 5871	683	0.462 4129	9.975 6048	73	30	
	40	9.513 2529	611	9.537 6554	683	0.462 3446	9.975 5975	73	20	
	50	9.513 3140	610	9.537 7237	683	0.462 2763	9.975 5902	72	10	
2	0	9.513 3750	610	9.537 7920	683	0.462 2080	9.975 5830	73	0	58
	10	9.513 4360	611	9.537 8603	683	0.462 1397	9.975 5757	72	50	
	20	9.513 4971	610	9.537 9286	683	0.462 0714	9.975 5685	73	40	
	30	9.513 5581	610	9.537 9969	682	0.462 0031	9.975 5612	73	30	
	40	9.513 6191	610	9.538 0651	683	0.461 9349	9.975 5539	72	20	
	50	9.513 6801	609	9.538 1334	683	0.461 8666	9.975 5467	73	10	
3	0	9.513 7410	610	9.538 2017	682	0.461 7983	9.975 5394	73	0	57
	10	9.513 8020	610	9.538 2699	682	0.461 7301	9.975 5321	73	50	
	20	9.513 8630	609	9.538 3381	683	0.461 6619	9.975 5248	72	40	
	30	9.513 9239	610	9.538 4064	682	0.461 5936	9.975 5176	73	30	
	40	9.513 9849	609	9.538 4746	682	0.461 5254	9.975 5103	73	20	
	50	9.514 0458	609	9.538 5428	682	0.461 4572	9.975 5030	73	10	
4	0	9.514 1067	609	9.538 6110	682	0.461 3890	9.975 4957	72	0	56
	10	9.514 1676	609	9.538 6792	682	0.461 3208	9.975 4885	73	50	
	20	9.514 2285	609	9.538 7474	681	0.461 2526	9.975 4812	73	40	
	30	9.514 2894	609	9.538 8155	682	0.461 1845	9.975 4739	73	30	
	40	9.514 3503	609	9.538 8837	682	0.461 1163	9.975 4666	73	20	
	50	9.514 4112	609	9.538 9519	681	0.461 0481	9.975 4593	72	10	
5	0	9.514 4721	608	9.539 0200	681	0.460 9800	9.975 4521	73	0	55
	10	9.514 5329	609	9.539 0881	682	0.460 9119	9.975 4448	73	50	
	20	9.514 5938	608	9.539 1563	681	0.460 8437	9.975 4375	73	40	
	30	9.514 6546	608	9.539 2244	681	0.460 7756	9.975 4302	73	30	
	40	9.514 7154	608	9.539 2925	681	0.460 7075	9.975 4229	73	20	
	50	9.514 7762	609	9.539 3606	681	0.460 6394	9.975 4156	73	10	
6	0	9.514 8371	608	9.539 4287	681	0.460 5713	9.975 4083	73	0	54
	10	9.514 8979	607	9.539 4968	681	0.460 5032	9.975 4010	73	50	
	20	9.514 9586	608	9.539 5649	681	0.460 4351	9.975 3937	72	40	
	30	9.515 0194	608	9.539 6330	680	0.460 3670	9.975 3865	73	30	
	40	9.515 0802	608	9.539 7010	681	0.460 2990	9.975 3792	73	20	
	50	9.515 1410	607	9.539 7691	680	0.460 2309	9.975 3719	73	10	
7	0	9.515 2017	607	9.539 8371	681	0.460 1629	9.975 3646	73	0	53
	10	9.515 2624	608	9.539 9052	680	0.460 0948	9.975 3573	73	50	
	20	9.515 3232	607	9.539 9732	680	0.460 0268	9.975 3500	73	40	
	30	9.515 3839	607	9.540 0412	681	0.459 9588	9.975 3427	73	30	
	40	9.515 4446	607	9.540 1093	680	0.459 8907	9.975 3354	73	20	
	50	9.515 5053	607	9.540 1773	680	0.459 8227	9.975 3281	73	10	
8	0	9.515 5660	607	9.540 2453	679	0.459 7547	9.975 3208	74	0	52
	10	9.515 6267	607	9.540 3132	680	0.459 6868	9.975 3134	73	50	
	20	9.515 6874	606	9.540 3812	680	0.459 6188	9.975 3061	73	40	
	30	9.515 7480	607	9.540 4492	680	0.459 5508	9.975 2988	73	30	
	40	9.515 8087	606	9.540 5172	679	0.459 4828	9.975 2915	73	20	
	50	9.515 8693	607	9.540 5851	680	0.459 4149	9.975 2842	73	10	
9	0	9.515 9300	606	9.540 6531	679	0.459 3469	9.975 2769	73	0	51
	10	9.515 9906	606	9.540 7210	679	0.459 2790	9.975 2696	73	50	
	20	9.516 0512	606	9.540 7889	680	0.459 2111	9.975 2623	73	40	
	30	9.516 1118	606	9.540 8569	679	0.459 1431	9.975 2550	73	30	
	40	9.516 1724	606	9.540 9248	679	0.459 0752	9.975 2477	74	20	
	50	9.516 2330	606	9.540 9927	679	0.459 0073	9.975 2403	73	10	
10	0	9.516 2936		9.541 0606		0.458 9394	9.975 2330		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	683
1	68.3
2	136.6
3	204.9
4	273.2
5	341.5
6	409.8
7	478.1
8	546.4
9	614.7

	681
1	68.1
2	136.2
3	204.3
4	272.4
5	340.5
6	408.6
7	476.7
8	544.8
9	612.9

	679
1	67.9
2	135.8
3	203.7
4	271.6
5	339.5
6	407.4
7	475.3
8	543.2
9	611.1

	611
1	61.1
2	122.2
3	183.3
4	244.4
5	305.5
6	366.6
7	427.7
8	488.8
9	549.9

	608
1	60.8
2	121.6
3	182.4
4	243.2
5	304.0
6	364.8
7	425.6
8	486.4
9	547.2

	73
1	7.3
2	14.6
3	21.9
4	29.2
5	36.5
6	43.8
7	51.1
8	58.4
9	65.7

70°

19°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.516 2936	606	9.541 0606	679	0.458 9394	9.975 2330	73	0	50
	10	9.516 3542	605	9.541 1285	679	0.458 8715	9.975 2257	73	50	
	20	9.516 4147	606	9.541 1964	678	0.458 8036	9.975 2184	73	40	
	30	9.516 4753	605	9.541 2642	679	0.458 7358	9.975 2111	74	30	
	40	9.516 5358	606	9.541 3321	679	0.458 6679	9.975 2037	73	20	
	50	9.516 5964	605	9.541 4000	678	0.458 6000	9.975 1964	73	10	
11	0	9.516 6569	605	9.541 4678	678	0.458 5322	9.975 1891	73	0	49
	10	9.516 7174	605	9.541 5356	679	0.458 4644	9.975 1818	74	50	
	20	9.516 7779	605	9.541 6035	678	0.458 3965	9.975 1744	73	40	
	30	9.516 8384	605	9.541 6713	678	0.458 3287	9.975 1671	73	30	
	40	9.516 8989	605	9.541 7391	678	0.458 2609	9.975 1598	74	20	
	50	9.516 9594	604	9.541 8069	678	0.458 1931	9.975 1524	73	10	
12	0	9.517 0198	605	9.541 8747	678	0.458 1253	9.975 1451	73	0	48
	10	9.517 0803	604	9.541 9425	678	0.458 0575	9.975 1378	74	50	
	20	9.517 1407	605	9.542 0103	678	0.457 9897	9.975 1304	73	40	
	30	9.517 2012	604	9.542 0781	677	0.457 9219	9.975 1231	73	30	
	40	9.517 2616	604	9.542 1458	678	0.457 8542	9.975 1158	74	20	
	50	9.517 3220	604	9.542 2136	677	0.457 7864	9.975 1084	73	10	
13	0	9.517 3824	604	9.542 2813	678	0.457 7187	9.975 1011	73	0	47
	10	9.517 4428	604	9.542 3491	677	0.457 6509	9.975 0938	74	50	
	20	9.517 5032	604	9.542 4168	677	0.457 5832	9.975 0864	73	40	
	30	9.517 5636	604	9.542 4845	677	0.457 5155	9.975 0791	74	30	
	40	9.517 6240	603	9.542 5522	678	0.457 4478	9.975 0717	73	20	
	50	9.517 6843	604	9.542 6200	677	0.457 3800	9.975 0644	74	10	
14	0	9.517 7447	603	9.542 6877	676	0.457 3123	9.975 0570	73	0	46
	10	9.517 8050	604	9.542 7553	677	0.457 2447	9.975 0497	74	50	
	20	9.517 8654	603	9.542 8230	677	0.457 1770	9.975 0423	73	40	
	30	9.517 9257	603	9.542 8907	677	0.457 1093	9.975 0350	73	30	
	40	9.517 9860	603	9.542 9584	676	0.457 0416	9.975 0277	74	20	
	50	9.518 0463	603	9.543 0260	677	0.456 9740	9.975 0203	74	10	
15	0	9.518 1066	603	9.543 0937	676	0.456 9063	9.975 0129	73	0	45
	10	9.518 1669	603	9.543 1613	677	0.456 8387	9.975 0056	74	50	
	20	9.518 2272	603	9.543 2290	676	0.456 7710	9.974 9982	73	40	
	30	9.518 2875	602	9.543 2966	676	0.456 7034	9.974 9909	74	30	
	40	9.518 3477	603	9.543 3642	676	0.456 6358	9.974 9835	73	20	
	50	9.518 4080	602	9.543 4318	676	0.456 5682	9.974 9762	74	10	
16	0	9.518 4682	602	9.543 4994	676	0.456 5006	9.974 9688	74	0	44
	10	9.518 5284	603	9.543 5670	676	0.456 4330	9.974 9614	73	50	
	20	9.518 5887	602	9.543 6346	676	0.456 3654	9.974 9541	74	40	
	30	9.518 6489	602	9.543 7022	675	0.456 2978	9.974 9467	73	30	
	40	9.518 7091	602	9.543 7697	676	0.456 2303	9.974 9394	74	20	
	50	9.518 7693	602	9.543 8373	675	0.456 1627	9.974 9320	74	10	
17	0	9.518 8295	601	9.543 9048	676	0.456 0952	9.974 9246	73	0	43
	10	9.518 8896	602	9.543 9724	675	0.456 0276	9.974 9173	74	50	
	20	9.518 9498	602	9.544 0399	675	0.455 9601	9.974 9099	74	40	
	30	9.519 0100	601	9.544 1074	676	0.455 8926	9.974 9025	73	30	
	40	9.519 0701	601	9.544 1750	675	0.455 8250	9.974 8952	74	20	
	50	9.519 1302	602	9.544 2425	675	0.455 7575	9.974 8878	74	10	
18	0	9.519 1904	601	9.544 3100	675	0.455 6900	9.974 8804	74	0	42
	10	9.519 2505	601	9.544 3775	674	0.455 6225	9.974 8730	73	50	
	20	9.519 3106	601	9.544 4449	675	0.455 5551	9.974 8657	74	40	
	30	9.519 3707	601	9.544 5124	675	0.455 4876	9.974 8583	74	30	
	40	9.519 4308	601	9.544 5799	675	0.455 4201	9.974 8509	74	20	
	50	9.519 4909	601	9.544 6474	674	0.455 3526	9.974 8435	74	10	
19	0	9.519 5510	600	9.544 7148	674	0.455 2852	9.974 8361	73	0	41
	10	9.519 6110	601	9.544 7822	675	0.455 2178	9.974 8288	74	50	
	20	9.519 6711	600	9.544 8497	674	0.455 1503	9.974 8214	74	40	
	30	9.519 7311	601	9.544 9171	674	0.455 0829	9.974 8140	74	30	
	40	9.519 7912	600	9.544 9845	674	0.455 0155	9.974 8066	74	20	
	50	9.519 8512	600	9.545 0519	674	0.454 9481	9.974 7992	74	10	
20	0	9.519 9112		9.545 1193		0.454 8807	9.974 7918		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

70°

	677
1	67.7
2	135.4
3	203.1
4	270.8
5	338.5
6	406.2
7	473.9
8	541.6
9	609.3

	675
1	67.5
2	135.0
3	202.5
4	270.0
5	337.5
6	405.0
7	472.5
8	540.0
9	607.5

	605
1	60.5
2	121.0
3	181.5
4	242.0
5	302.5
6	363.0
7	423.5
8	484.0
9	544.5

	603
1	60.3
2	120.6
3	180.9
4	241.2
5	301.5
6	361.8
7	422.1
8	482.4
9	542.7

	601
1	60.1
2	120.2
3	180.3
4	240.4
5	300.5
6	360.6
7	420.7
8	480.8
9	540.9

	74
1	7.4
2	14.8
3	22.2
4	29.6
5	37.0
6	44.4
7	51.8
8	59.2
9	66.6

19°

674	
1	67.4
2	134.8
3	202.2
4	269.6
5	337.0
6	404.4
7	471.8
8	539.2
9	606.6

672	
1	67.2
2	134.4
3	201.6
4	268.8
5	336.0
6	403.2
7	470.4
8	537.6
9	604.8

669	
1	66.9
2	133.8
3	200.7
4	267.6
5	334.5
6	401.4
7	468.3
8	535.2
9	602.1

599	
1	59.9
2	119.8
3	179.7
4	239.6
5	299.5
6	359.4
7	419.3
8	479.2
9	539.1

596	
1	59.6
2	119.2
3	178.8
4	238.4
5	298.0
6	357.6
7	417.2
8	476.8
9	536.4

74	
1	7.4
2	14.8
3	22.2
4	29.6
5	37.0
6	44.4
7	51.8
8	59.2
9	66.6

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.519 9112	600	9.545 1193	674	0.454 8807	9.974 7918	73	0	40
	10	9.519 9712	600	9.545 1867	674	0.454 8133	9.974 7845	74	50	
	20	9.520 0312	600	9.545 2541	674	0.454 7459	9.974 7771	74	40	
	30	9.520 0912	600	9.545 3215	674	0.454 6785	9.974 7697	74	30	
	40	9.520 1512	599	9.545 3889	673	0.454 6111	9.974 7623	74	20	
	50	9.520 2111	600	9.545 4562	674	0.454 5438	9.974 7549	74	10	
21	0	9.520 2711	600	9.545 5236	673	0.454 4764	9.974 7475	74	0	39
	10	9.520 3311	599	9.545 5909	674	0.454 4091	9.974 7401	74	50	
	20	9.520 3910	599	9.545 6583	673	0.454 3417	9.974 7327	74	40	
	30	9.520 4509	600	9.545 7256	673	0.454 2744	9.974 7253	74	30	
	40	9.520 5109	599	9.545 7929	673	0.454 2071	9.974 7179	74	20	
	50	9.520 5708	599	9.545 8602	674	0.454 1398	9.974 7105	74	10	
22	0	9.520 6307	599	9.545 9276	673	0.454 0724	9.974 7031	74	0	38
	10	9.520 6906	599	9.545 9949	672	0.454 0051	9.974 6957	74	50	
	20	9.520 7505	598	9.546 0621	673	0.453 9379	9.974 6883	74	40	
	30	9.520 8103	599	9.546 1294	673	0.453 8706	9.974 6809	74	30	
	40	9.520 8702	599	9.546 1967	673	0.453 8033	9.974 6735	74	20	
	50	9.520 9301	598	9.546 2640	672	0.453 7360	9.974 6661	74	10	
23	0	9.520 9899	598	9.546 3312	673	0.453 6688	9.974 6587	74	0	37
	10	9.521 0497	599	9.546 3985	672	0.453 6015	9.974 6513	74	50	
	20	9.521 1096	598	9.546 4657	672	0.453 5343	9.974 6439	74	40	
	30	9.521 1694	598	9.546 5329	673	0.453 4671	9.974 6365	74	30	
	40	9.521 2292	598	9.546 6002	672	0.453 3998	9.974 6291	75	20	
	50	9.521 2890	598	9.546 6674	672	0.453 3326	9.974 6216	74	10	
24	0	9.521 3488	598	9.546 7346	672	0.453 2654	9.974 6142	74	0	36
	10	9.521 4086	598	9.546 8018	672	0.453 1982	9.974 6068	74	50	
	20	9.521 4684	597	9.546 8690	672	0.453 1310	9.974 5994	74	40	
	30	9.521 5281	598	9.546 9362	671	0.453 0638	9.974 5920	74	30	
	40	9.521 5879	597	9.547 0033	672	0.452 9967	9.974 5846	75	20	
	50	9.521 6476	598	9.547 0705	672	0.452 9295	9.974 5771	74	10	
25	0	9.521 7074	597	9.547 1377	671	0.452 8623	9.974 5697	74	0	35
	10	9.521 7671	597	9.547 2048	672	0.452 7952	9.974 5623	74	50	
	20	9.521 8268	597	9.547 2720	671	0.452 7280	9.974 5549	75	40	
	30	9.521 8865	597	9.547 3391	671	0.452 6609	9.974 5474	74	30	
	40	9.521 9462	597	9.547 4062	671	0.452 5938	9.974 5400	74	20	
	50	9.522 0059	597	9.547 4733	672	0.452 5267	9.974 5326	74	10	
26	0	9.522 0656	597	9.547 5405	671	0.452 4595	9.974 5252	75	0	34
	10	9.522 1253	597	9.547 6076	671	0.452 3924	9.974 5177	74	50	
	20	9.522 1850	596	9.547 6747	670	0.452 3253	9.974 5103	74	40	
	30	9.522 2446	597	9.547 7417	671	0.452 2583	9.974 5029	75	30	
	40	9.522 3043	596	9.547 8088	671	0.452 1912	9.974 4954	74	20	
	50	9.522 3639	596	9.547 8759	671	0.452 1241	9.974 4880	74	10	
27	0	9.522 4235	596	9.547 9430	670	0.452 0570	9.974 4806	75	0	33
	10	9.522 4831	597	9.548 0100	671	0.451 9900	9.974 4731	74	50	
	20	9.522 5428	596	9.548 0771	670	0.451 9229	9.974 4657	74	40	
	30	9.522 6024	595	9.548 1441	670	0.451 8559	9.974 4583	75	30	
	40	9.522 6619	596	9.548 2111	670	0.451 7889	9.974 4508	74	20	
	50	9.522 7215	596	9.548 2781	671	0.451 7219	9.974 4434	75	10	
28	0	9.522 7811	596	9.548 3452	670	0.451 6548	9.974 4359	74	0	32
	10	9.522 8407	595	9.548 4122	670	0.451 5878	9.974 4285	74	50	
	20	9.522 9002	596	9.548 4792	670	0.451 5208	9.974 4211	75	40	
	30	9.522 9598	595	9.548 5462	669	0.451 4538	9.974 4136	74	30	
	40	9.523 0193	595	9.548 6131	670	0.451 3869	9.974 4062	75	20	
	50	9.523 0788	595	9.548 6801	670	0.451 3199	9.974 3987	74	10	
29	0	9.523 1383	596	9.548 7471	669	0.451 2529	9.974 3913	75	0	31
	10	9.523 1979	595	9.548 8140	670	0.451 1860	9.974 3838	74	50	
	20	9.523 2574	594	9.548 8810	669	0.451 1190	9.974 3764	75	40	
	30	9.523 3168	595	9.548 9479	670	0.451 0521	9.974 3689	74	30	
	40	9.523 3763	595	9.549 0149	669	0.450 9851	9.974 3615	75	20	
	50	9.523 4358	595	9.549 0818	669	0.450 9182	9.974 3540	74	10	
30	0	9.523 4953		9.549 1487		0.450 8513	9.974 3466		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

70°

19°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.523 4953	594	9.549 1487	669	0.450 8513	9.974 3466	75	0	30
	10	9.523 5547	595	9.549 2156	669	0.450 7844	9.974 3391	75	50	
	20	9.523 6142	594	9.549 2825	669	0.450 7175	9.974 3316	74	40	
	30	9.523 6736	594	9.549 3494	669	0.450 6506	9.974 3242	75	30	
	40	9.523 7330	594	9.549 4163	669	0.450 5837	9.974 3167	74	20	
	50	9.523 7924	594	9.549 4832	668	0.450 5168	9.974 3093	75	10	
31	0	9.523 8518	594	9.549 5500	669	0.450 4500	9.974 3018	75	0	29
	10	9.523 9112	594	9.549 6169	669	0.450 3831	9.974 2943	74	50	
	20	9.523 9706	594	9.549 6838	668	0.450 3162	9.974 2869	75	40	
	30	9.524 0300	594	9.549 7506	668	0.450 2494	9.974 2794	75	30	
	40	9.524 0894	593	9.549 8174	669	0.450 1826	9.974 2719	74	20	
	50	9.524 1487	594	9.549 8843	668	0.450 1157	9.974 2645	75	10	
32	0	9.524 2081	593	9.549 9511	668	0.450 0489	9.974 2570	75	0	28
	10	9.524 2674	594	9.550 0179	668	0.449 9821	9.974 2495	74	50	
	20	9.524 3268	593	9.550 0847	668	0.449 9153	9.974 2421	75	40	
	30	9.524 3861	593	9.550 1515	668	0.449 8485	9.974 2346	75	30	
	40	9.524 4454	593	9.550 2183	668	0.449 7817	9.974 2271	75	20	
	50	9.524 5047	593	9.550 2851	668	0.449 7149	9.974 2196	74	10	
33	0	9.524 5640	593	9.550 3519	667	0.449 6481	9.974 2122	75	0	27
	10	9.524 6233	593	9.550 4186	668	0.449 5814	9.974 2047	75	50	
	20	9.524 6826	593	9.550 4854	667	0.449 5146	9.974 1972	75	40	
	30	9.524 7419	592	9.550 5521	668	0.449 4479	9.974 1897	75	30	
	40	9.524 8011	593	9.550 6189	667	0.449 3811	9.974 1822	74	20	
	50	9.524 8604	592	9.550 6856	667	0.449 3144	9.974 1748	75	10	
34	0	9.524 9196	593	9.550 7523	668	0.449 2477	9.974 1673	75	0	26
	10	9.524 9789	592	9.550 8191	667	0.449 1809	9.974 1598	75	50	
	20	9.525 0381	592	9.550 8858	667	0.449 1142	9.974 1523	75	40	
	30	9.525 0973	592	9.550 9525	667	0.449 0475	9.974 1448	75	30	
	40	9.525 1565	592	9.551 0192	667	0.448 9808	9.974 1373	75	20	
	50	9.525 2157	592	9.551 0859	666	0.448 9141	9.974 1298	74	10	
35	0	9.525 2749	592	9.551 1525	667	0.448 8475	9.974 1224	75	0	25
	10	9.525 3341	591	9.551 2192	667	0.448 7808	9.974 1149	75	50	
	20	9.525 3932	592	9.551 2859	666	0.448 7141	9.974 1074	75	40	
	30	9.525 4524	592	9.551 3525	667	0.448 6475	9.974 0999	75	30	
	40	9.525 5116	591	9.551 4192	666	0.448 5808	9.974 0924	75	20	
	50	9.525 5707	591	9.551 4858	666	0.448 5142	9.974 0849	75	10	
36	0	9.525 6298	592	9.551 5524	667	0.448 4476	9.974 0774	75	0	24
	10	9.525 6890	591	9.551 6191	666	0.448 3809	9.974 0699	75	50	
	20	9.525 7481	591	9.551 6857	666	0.448 3143	9.974 0624	75	40	
	30	9.525 8072	591	9.551 7523	666	0.448 2477	9.974 0549	75	30	
	40	9.525 8663	591	9.551 8189	666	0.448 1811	9.974 0474	75	20	
	50	9.525 9254	590	9.551 8855	666	0.448 1145	9.974 0399	75	10	
37	0	9.525 9844	591	9.551 9521	665	0.448 0479	9.974 0324	75	0	23
	10	9.526 0435	591	9.552 0186	666	0.447 9814	9.974 0249	75	50	
	20	9.526 1026	590	9.552 0852	666	0.447 9148	9.974 0174	75	40	
	30	9.526 1616	591	9.552 1518	665	0.447 8482	9.974 0099	75	30	
	40	9.526 2207	590	9.552 2183	666	0.447 7817	9.974 0024	76	20	
	50	9.526 2797	590	9.552 2849	665	0.447 7151	9.973 9948	75	10	
38	0	9.526 3387	591	9.552 3514	665	0.447 6486	9.973 9873	75	0	22
	10	9.526 3978	590	9.552 4179	665	0.447 5821	9.973 9798	75	50	
	20	9.526 4568	590	9.552 4844	666	0.447 5156	9.973 9723	75	40	
	30	9.526 5158	589	9.552 5510	665	0.447 4490	9.973 9648	75	30	
	40	9.526 5747	590	9.552 6175	665	0.447 3825	9.973 9573	75	20	
	50	9.526 6337	590	9.552 6840	664	0.447 3160	9.973 9498	76	10	
39	0	9.526 6927	590	9.552 7504	665	0.447 2496	9.973 9422	75	0	21
	10	9.526 7517	589	9.552 8169	665	0.447 1831	9.973 9347	75	50	
	20	9.526 8106	590	9.552 8834	665	0.447 1166	9.973 9272	75	40	
	30	9.526 8696	589	9.552 9499	664	0.447 0501	9.973 9197	75	30	
	40	9.526 9285	589	9.553 0163	665	0.446 9837	9.973 9122	76	20	
	50	9.526 9874	589	9.553 0828	664	0.446 9172	9.973 9046	75	10	
40	0	9.527 0463		9.553 1492		0.446 8508	9.973 8971		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

70°

	667
1	66.7
2	133.4
3	200.1
4	266.8
5	333.5
6	400.2
7	466.9
8	533.6
9	600.3

	665
1	66.5
2	133.0
3	199.5
4	266.0
5	332.5
6	399.0
7	465.5
8	532.0
9	598.5

	594
1	59.4
2	118.8
3	178.2
4	237.6
5	297.0
6	356.4
7	415.8
8	475.2
9	534.6

	592
1	59.2
2	118.4
3	177.6
4	236.8
5	296.0
6	355.2
7	414.4
8	473.6
9	532.8

	589
1	58.9
2	117.8
3	176.7
4	235.6
5	294.5
6	353.4
7	412.3
8	471.2
9	530.1

	75
1	7.5
2	15.0
3	22.5
4	30.0
5	37.5
6	45.0
7	52.5
8	60.0
9	67.5

19°

664	
1	66.4
2	132.8
3	199.2
4	265.6
5	332.0
6	398.4
7	464.8
8	531.2
9	597.6

662	
1	66.2
2	132.4
3	198.6
4	264.8
5	331.0
6	397.2
7	463.4
8	529.6
9	595.8

660	
1	66.0
2	132.0
3	198.0
4	264.0
5	330.0
6	396.0
7	462.0
8	528.0
9	594.0

588	
1	58.8
2	117.6
3	176.4
4	235.2
5	294.0
6	352.8
7	411.6
8	470.4
9	529.2

586	
1	58.6
2	117.2
3	175.8
4	234.4
5	293.0
6	351.6
7	410.2
8	468.8
9	527.4

76	
1	7.6
2	15.2
3	22.8
4	30.4
5	38.0
6	45.6
7	53.2
8	60.8
9	68.4

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.527 0463	589	9.553 1492	665	0.446 8508	9.973 8971	75	0	20
	10	9.527 1052	589	9.553 2157	664	0.446 7843	9.973 8896	75	50	
	20	9.527 1641	589	9.553 2821	664	0.446 7179	9.973 8821	76	40	
	30	9.527 2230	589	9.553 3485	664	0.446 6515	9.973 8745	75	30	
	40	9.527 2819	589	9.553 4149	664	0.446 5851	9.973 8670	75	20	
	50	9.527 3408	589	9.553 4813	664	0.446 5187	9.973 8595	76	10	
41	0	9.527 3997	588	9.553 5477	664	0.446 4523	9.973 8519	75	0	19
	10	9.527 4585	589	9.553 6141	664	0.446 3859	9.973 8444	75	50	
	20	9.527 5174	588	9.553 6805	663	0.446 3195	9.973 8369	76	40	
	30	9.527 5762	588	9.553 7468	664	0.446 2532	9.973 8293	75	30	
	40	9.527 6350	588	9.553 8132	664	0.446 1868	9.973 8218	75	20	
	50	9.527 6938	588	9.553 8796	663	0.446 1204	9.973 8143	76	10	
42	0	9.527 7526	588	9.553 9459	663	0.446 0541	9.973 8067	75	0	18
	10	9.527 8114	588	9.554 0122	664	0.445 9878	9.973 7992	75	50	
	20	9.527 8702	588	9.554 0786	663	0.445 9214	9.973 7917	76	40	
	30	9.527 9290	588	9.554 1449	663	0.445 8551	9.973 7841	75	30	
	40	9.527 9878	588	9.554 2112	663	0.445 7888	9.973 7766	76	20	
	50	9.528 0466	587	9.554 2775	663	0.445 7225	9.973 7690	75	10	
43	0	9.528 1053	588	9.554 3438	663	0.445 6562	9.973 7615	76	0	17
	10	9.528 1641	587	9.554 4101	663	0.445 5899	9.973 7539	75	50	
	20	9.528 2228	587	9.554 4764	663	0.445 5236	9.973 7464	76	40	
	30	9.528 2815	587	9.554 5427	663	0.445 4573	9.973 7388	75	30	
	40	9.528 3402	588	9.554 6090	662	0.445 3910	9.973 7313	76	20	
	50	9.528 3990	587	9.554 6752	663	0.445 3248	9.973 7237	75	10	
44	0	9.528 4577	586	9.554 7415	662	0.445 2585	9.973 7162	76	0	16
	10	9.528 5163	587	9.554 8077	663	0.445 1923	9.973 7086	75	50	
	20	9.528 5750	587	9.554 8740	662	0.445 1260	9.973 7011	76	40	
	30	9.528 6337	587	9.554 9402	662	0.445 0598	9.973 6935	75	30	
	40	9.528 6924	586	9.555 0064	662	0.444 9936	9.973 6860	76	20	
	50	9.528 7510	587	9.555 0726	662	0.444 9274	9.973 6784	75	10	
45	0	9.528 8097	586	9.555 1388	662	0.444 8612	9.973 6709	76	0	15
	10	9.528 8683	586	9.555 2050	662	0.444 7950	9.973 6633	76	50	
	20	9.528 9269	587	9.555 2712	662	0.444 7288	9.973 6557	75	40	
	30	9.528 9856	586	9.555 3374	662	0.444 6626	9.973 6482	76	30	
	40	9.529 0442	586	9.555 4036	661	0.444 5964	9.973 6406	76	20	
	50	9.529 1028	586	9.555 4697	662	0.444 5303	9.973 6330	75	10	
46	0	9.529 1614	586	9.555 5359	662	0.444 4641	9.973 6255	76	0	14
	10	9.529 2200	585	9.555 6021	661	0.444 3979	9.973 6179	76	50	
	20	9.529 2785	586	9.555 6682	661	0.444 3318	9.973 6103	75	40	
	30	9.529 3371	586	9.555 7343	662	0.444 2657	9.973 6028	76	30	
	40	9.529 3957	585	9.555 8005	661	0.444 1995	9.973 5952	76	20	
	50	9.529 4542	586	9.555 8666	661	0.444 1334	9.973 5876	75	10	
47	0	9.529 5128	585	9.555 9327	661	0.444 0673	9.973 5801	76	0	13
	10	9.529 5713	585	9.555 9988	661	0.444 0012	9.973 5725	76	50	
	20	9.529 6298	585	9.556 0649	661	0.443 9351	9.973 5649	76	40	
	30	9.529 6883	585	9.556 1310	661	0.443 8690	9.973 5573	75	30	
	40	9.529 7468	585	9.556 1971	661	0.443 8029	9.973 5498	76	20	
	50	9.529 8053	585	9.556 2632	660	0.443 7368	9.973 5422	76	10	
48	0	9.529 8638	585	9.556 3292	661	0.443 6708	9.973 5346	76	0	12
	10	9.529 9223	585	9.556 3953	660	0.443 6047	9.973 5270	76	50	
	20	9.529 9808	584	9.556 4613	661	0.443 5387	9.973 5194	76	40	
	30	9.530 0392	585	9.556 5274	660	0.443 4726	9.973 5118	75	30	
	40	9.530 0977	584	9.556 5934	660	0.443 4066	9.973 5043	76	20	
	50	9.530 1561	585	9.556 6594	661	0.443 3406	9.973 4967	76	10	
49	0	9.530 2146	584	9.556 7255	660	0.443 2745	9.973 4891	76	0	11
	10	9.530 2730	584	9.556 7915	660	0.443 2085	9.973 4815	76	50	
	20	9.530 3314	584	9.556 8575	660	0.443 1425	9.973 4739	76	40	
	30	9.530 3898	584	9.556 9235	660	0.443 0765	9.973 4663	76	30	
	40	9.530 4482	584	9.556 9895	660	0.443 0105	9.973 4587	76	20	
	50	9.530 5066	584	9.557 0555	659	0.442 9445	9.973 4511	76	10	
50	0	9.530 5650		9.557 1214		0.442 8786	9.973 4435		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

19°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.530 5650	583	9.557 1214	660	0.442 8786	9.973 4435	75	0	10
	10	9.530 6233	584	9.557 1874	660	0.442 8126	9.973 4360	76	50	
	20	9.530 6817	584	9.557 2534	659	0.442 7466	9.973 4284	76	40	
	30	9.530 7401	583	9.557 3193	659	0.442 6807	9.973 4208	76	30	
	40	9.530 7984	583	9.557 3852	660	0.442 6148	9.973 4132	76	20	
	50	9.530 8567	584	9.557 4512	659	0.442 5488	9.973 4056	76	10	
51	0	9.530 9151	583	9.557 5171	659	0.442 4829	9.973 3980	76	0	9
	10	9.530 9734	583	9.557 5830	659	0.442 4170	9.973 3904	76	50	
	20	9.531 0317	583	9.557 6489	660	0.442 3511	9.973 3828	76	40	
	30	9.531 0900	583	9.557 7149	658	0.442 2851	9.973 3752	77	30	
	40	9.531 1483	583	9.557 7807	659	0.442 2193	9.973 3675	76	20	
	50	9.531 2066	583	9.557 8466	659	0.442 1534	9.973 3599	76	10	
52	0	9.531 2649	582	9.557 9125	659	0.442 0875	9.973 3523	76	0	8
	10	9.531 3231	583	9.557 9784	659	0.442 0216	9.973 3447	76	50	
	20	9.531 3814	582	9.558 0443	658	0.441 9557	9.973 3371	76	40	
	30	9.531 4396	583	9.558 1101	659	0.441 8899	9.973 3295	76	30	
	40	9.531 4979	582	9.558 1760	658	0.441 8240	9.973 3219	76	20	
	50	9.531 5561	582	9.558 2418	659	0.441 7582	9.973 3143	76	10	
53	0	9.531 6143	582	9.558 3077	658	0.441 6923	9.973 3067	77	0	7
	10	9.531 6725	582	9.558 3735	658	0.441 6265	9.973 2990	76	50	
	20	9.531 7307	582	9.558 4393	658	0.441 5607	9.973 2914	76	40	
	30	9.531 7889	582	9.558 5051	658	0.441 4949	9.973 2838	76	30	
	40	9.531 8471	582	9.558 5709	658	0.441 4291	9.973 2762	76	20	
	50	9.531 9053	582	9.558 6367	658	0.441 3633	9.973 2686	76	10	
54	0	9.531 9635	581	9.558 7025	658	0.441 2975	9.973 2610	77	0	6
	10	9.532 0216	582	9.558 7683	658	0.441 2317	9.973 2533	76	50	
	20	9.532 0798	581	9.558 8341	657	0.441 1659	9.973 2457	76	40	
	30	9.532 1379	581	9.558 8998	658	0.441 1002	9.973 2381	76	30	
	40	9.532 1960	582	9.558 9656	657	0.441 0344	9.973 2305	77	20	
	50	9.532 2542	581	9.559 0313	658	0.440 9687	9.973 2228	76	10	
55	0	9.532 3123	581	9.559 0971	657	0.440 9029	9.973 2152	76	0	5
	10	9.532 3704	581	9.559 1628	658	0.440 8372	9.973 2076	77	50	
	20	9.532 4285	581	9.559 2286	657	0.440 7714	9.973 1999	76	40	
	30	9.532 4866	581	9.559 2943	657	0.440 7057	9.973 1923	76	30	
	40	9.532 5447	580	9.559 3600	657	0.440 6400	9.973 1847	77	20	
	50	9.532 6027	581	9.559 4257	657	0.440 5743	9.973 1770	76	10	
56	0	9.532 6608	581	9.559 4914	657	0.440 5086	9.973 1694	76	0	4
	10	9.532 7189	580	9.559 5571	657	0.440 4429	9.973 1618	77	50	
	20	9.532 7769	580	9.559 6228	656	0.440 3772	9.973 1541	76	40	
	30	9.532 8349	581	9.559 6884	657	0.440 3116	9.973 1465	76	30	
	40	9.532 8930	580	9.559 7541	657	0.440 2459	9.973 1389	77	20	
	50	9.532 9510	580	9.559 8198	656	0.440 1802	9.973 1312	76	10	
57	0	9.533 0090	580	9.559 8854	657	0.440 1146	9.973 1236	77	0	3
	10	9.533 0670	580	9.559 9511	656	0.440 0489	9.973 1159	76	50	
	20	9.533 1250	580	9.560 0167	656	0.439 9833	9.973 1083	77	40	
	30	9.533 1830	579	9.560 0823	657	0.439 9177	9.973 1006	76	30	
	40	9.533 2409	580	9.560 1480	656	0.439 8520	9.973 0930	77	20	
	50	9.533 2989	580	9.560 2136	656	0.439 7864	9.973 0853	76	10	
58	0	9.533 3569	579	9.560 2792	656	0.439 7208	9.973 0777	77	0	2
	10	9.533 4148	580	9.560 3448	656	0.439 6552	9.973 0700	76	50	
	20	9.533 4728	579	9.560 4104	656	0.439 5896	9.973 0624	77	40	
	30	9.533 5307	579	9.560 4760	655	0.439 5240	9.973 0547	76	30	
	40	9.533 5886	579	9.560 5415	656	0.439 4585	9.973 0471	77	20	
	50	9.533 6465	579	9.560 6071	656	0.439 3929	9.973 0394	76	10	
59	0	9.533 7044	579	9.560 6727	655	0.439 3273	9.973 0318	77	0	1
	10	9.533 7623	579	9.560 7382	656	0.439 2618	9.973 0241	76	50	
	20	9.533 8202	579	9.560 8038	655	0.439 1962	9.973 0165	77	40	
	30	9.533 8781	579	9.560 8693	655	0.439 1307	9.973 0088	77	30	
	40	9.533 9360	578	9.560 9348	656	0.439 0652	9.973 0011	76	20	
	50	9.533 9938	579	9.561 0004	655	0.438 9996	9.972 9935	77	10	
60	0	9.534 0517		9.561 0659		0.438 9341	9.972 9858		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

70°

	658
1	65.8
2	131.6
3	197.4
4	263.2
5	329.0
6	394.8
7	460.6
8	526.4
9	592.2

	656
1	65.6
2	131.2
3	196.8
4	262.4
5	328.0
6	393.6
7	459.2
8	524.8
9	590.4

	583
1	58.3
2	116.6
3	174.9
4	233.2
5	291.5
6	349.8
7	408.1
8	466.4
9	524.7

	581
1	58.1
2	116.2
3	174.3
4	232.4
5	290.5
6	348.6
7	406.7
8	464.8
9	522.9

	579
1	57.9
2	115.8
3	173.7
4	231.6
5	289.5
6	347.4
7	405.3
8	463.2
9	521.1

	77
1	7.7
2	15.4
3	23.1
4	30.8
5	38.5
6	46.2
7	53.9
8	61.6
9	69.3

20°

655	
1	65.5
2	131.0
3	196.5
4	262.0
5	327.5
6	393.0
7	458.5
8	524.0
9	589.5

653	
1	65.3
2	130.6
3	195.9
4	261.2
5	326.5
6	391.8
7	457.1
8	522.4
9	587.7

651	
1	65.1
2	130.2
3	195.3
4	260.4
5	325.5
6	390.6
7	455.7
8	520.8
9	585.9

578	
1	57.8
2	115.6
3	173.4
4	231.2
5	289.0
6	346.8
7	404.6
8	462.4
9	520.2

575	
1	57.5
2	115.0
3	172.5
4	230.0
5	287.5
6	345.0
7	402.5
8	460.0
9	517.5

77	
1	7.7
2	15.4
3	23.1
4	30.8
5	38.5
6	46.2
7	53.9
8	61.6
9	69.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.534 0517	578	9.561 0659	655	0.438 9341	9.972 9858	76	0	60
	10	9.534 1095	579	9.561 1314	655	0.438 8686	9.972 9782	77	50	
	20	9.534 1674	578	9.561 1969	655	0.438 8031	9.972 9705	77	40	
	30	9.534 2252	578	9.561 2624	655	0.438 7376	9.972 9628	76	30	
	40	9.534 2830	578	9.561 3279	654	0.438 6721	9.972 9552	77	20	
	50	9.534 3408	578	9.561 3933	655	0.438 6067	9.972 9475	77	10	
1	0	9.534 3986	578	9.561 4588	655	0.438 5412	9.972 9398	77	0	59
	10	9.534 4564	578	9.561 5243	654	0.438 4757	9.972 9321	76	50	
	20	9.534 5142	578	9.561 5897	655	0.438 4103	9.972 9245	77	40	
	30	9.534 5720	577	9.561 6552	654	0.438 3448	9.972 9168	77	30	
	40	9.534 6297	578	9.561 7206	654	0.438 2794	9.972 9091	77	20	
	50	9.534 6875	577	9.561 7860	655	0.438 2140	9.972 9014	76	10	
2	0	9.534 7452	578	9.561 8515	654	0.438 1485	9.972 8938	77	0	58
	10	9.534 8030	577	9.561 9169	654	0.438 0831	9.972 8861	77	50	
	20	9.534 8607	577	9.561 9823	654	0.438 0177	9.972 8784	77	40	
	30	9.534 9184	577	9.562 0477	654	0.437 9523	9.972 8707	76	30	
	40	9.534 9761	578	9.562 1131	654	0.437 8869	9.972 8631	77	20	
	50	9.535 0339	576	9.562 1785	654	0.437 8215	9.972 8554	77	10	
3	0	9.535 0915	577	9.562 2439	653	0.437 7561	9.972 8477	77	0	57
	10	9.535 1492	577	9.562 3092	654	0.437 6908	9.972 8400	77	50	
	20	9.535 2069	577	9.562 3746	654	0.437 6254	9.972 8323	77	40	
	30	9.535 2646	576	9.562 4400	653	0.437 5600	9.972 8246	77	30	
	40	9.535 3222	577	9.562 5053	653	0.437 4947	9.972 8169	76	20	
	50	9.535 3799	576	9.562 5706	654	0.437 4294	9.972 8093	77	10	
4	0	9.535 4375	577	9.562 6360	653	0.437 3640	9.972 8016	77	0	56
	10	9.535 4952	576	9.562 7013	653	0.437 2987	9.972 7939	77	50	
	20	9.535 5528	576	9.562 7666	653	0.437 2334	9.972 7862	77	40	
	30	9.535 6104	576	9.562 8319	653	0.437 1681	9.972 7785	77	30	
	40	9.535 6680	576	9.562 8972	653	0.437 1028	9.972 7708	77	20	
	50	9.535 7256	576	9.562 9625	653	0.437 0375	9.972 7631	77	10	
5	0	9.535 7832	576	9.563 0278	653	0.436 9722	9.972 7554	77	0	55
	10	9.535 8408	576	9.563 0931	653	0.436 9069	9.972 7477	77	50	
	20	9.535 8984	576	9.563 1584	653	0.436 8416	9.972 7400	77	40	
	30	9.535 9560	575	9.563 2237	652	0.436 7763	9.972 7323	77	30	
	40	9.536 0135	576	9.563 2889	653	0.436 7111	9.972 7246	77	20	
	50	9.536 0711	575	9.563 3542	652	0.436 6458	9.972 7169	77	10	
6	0	9.536 1286	575	9.563 4194	653	0.436 5806	9.972 7092	77	0	54
	10	9.536 1861	576	9.563 4847	652	0.436 5153	9.972 7015	77	50	
	20	9.536 2437	575	9.563 5499	652	0.436 4501	9.972 6938	77	40	
	30	9.536 3012	575	9.563 6151	652	0.436 3849	9.972 6861	77	30	
	40	9.536 3587	575	9.563 6803	652	0.436 3197	9.972 6784	78	20	
	50	9.536 4162	575	9.563 7455	652	0.436 2545	9.972 6706	77	10	
7	0	9.536 4737	574	9.563 8107	652	0.436 1893	9.972 6629	77	0	53
	10	9.536 5311	575	9.563 8759	652	0.436 1241	9.972 6552	77	50	
	20	9.536 5886	575	9.563 9411	652	0.436 0589	9.972 6475	77	40	
	30	9.536 6461	574	9.564 0063	652	0.435 9937	9.972 6398	77	30	
	40	9.536 7035	575	9.564 0715	651	0.435 9285	9.972 6321	77	20	
	50	9.536 7610	574	9.564 1366	652	0.435 8634	9.972 6244	78	10	
8	0	9.536 8184	574	9.564 2018	651	0.435 7982	9.972 6166	77	0	52
	10	9.536 8758	575	9.564 2669	652	0.435 7331	9.972 6089	77	50	
	20	9.536 9333	574	9.564 3321	651	0.435 6679	9.972 6012	77	40	
	30	9.536 9907	574	9.564 3972	651	0.435 6028	9.972 5935	77	30	
	40	9.537 0481	574	9.564 4623	651	0.435 5377	9.972 5858	78	20	
	50	9.537 1055	574	9.564 5274	651	0.435 4726	9.972 5780	77	10	
9	0	9.537 1629	573	9.564 5925	652	0.435 4075	9.972 5703	77	0	51
	10	9.537 2202	574	9.564 6577	650	0.435 3423	9.972 5626	78	50	
	20	9.537 2776	574	9.564 7227	651	0.435 2773	9.972 5548	77	40	
	30	9.537 3350	573	9.564 7878	651	0.435 2122	9.972 5471	77	30	
	40	9.537 3923	573	9.564 8529	651	0.435 1471	9.972 5394	77	20	
	50	9.537 4496	574	9.564 9180	651	0.435 0820	9.972 5317	78	10	
10	0	9.537 5070		9.564 9831		0.435 0169	9.972 5239		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

69°

20°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.537 5070	573	9.564 9831	650	0.435 0169	9.972 5239	77	0	50
	10	9.537 5643	573	9.565 0481	651	0.434 9519	9.972 5162	77	50	
	20	9.537 6216	573	9.565 1132	650	0.434 8868	9.972 5085	78	40	
	30	9.537 6789	573	9.565 1782	650	0.434 8218	9.972 5007	77	30	
	40	9.537 7362	573	9.565 2432	651	0.434 7568	9.972 4930	78	20	
	50	9.537 7935	573	9.565 3083	650	0.434 6917	9.972 4852	77	10	
11	0	9.537 8508	573	9.565 3733	650	0.434 6267	9.972 4775	77	0	49
	10	9.537 9081	572	9.565 4383	650	0.434 5617	9.972 4698	78	50	
	20	9.537 9653	573	9.565 5033	650	0.434 4967	9.972 4620	77	40	
	30	9.538 0226	572	9.565 5683	650	0.434 4317	9.972 4543	78	30	
	40	9.538 0798	573	9.565 6333	650	0.434 3667	9.972 4465	77	20	
	50	9.538 1371	572	9.565 6983	650	0.434 3017	9.972 4388	78	10	
12	0	9.538 1943	572	9.565 7633	649	0.434 2367	9.972 4310	77	0	48
	10	9.538 2515	572	9.565 8282	650	0.434 1718	9.972 4233	77	50	
	20	9.538 3087	573	9.565 8932	650	0.434 1068	9.972 4156	78	40	
	30	9.538 3660	572	9.565 9582	649	0.434 0418	9.972 4078	77	30	
	40	9.538 4232	571	9.566 0231	649	0.433 9769	9.972 4001	78	20	
	50	9.538 4803	572	9.566 0880	650	0.433 9120	9.972 3923	78	10	
13	0	9.538 5375	572	9.566 1530	649	0.433 8470	9.972 3845	77	0	47
	10	9.538 5947	572	9.566 2179	649	0.433 7821	9.972 3768	78	50	
	20	9.538 6519	571	9.566 2828	649	0.433 7172	9.972 3690	77	40	
	30	9.538 7090	571	9.566 3477	649	0.433 6523	9.972 3613	78	30	
	40	9.538 7661	572	9.566 4126	649	0.433 5874	9.972 3535	77	20	
	50	9.538 8233	571	9.566 4775	649	0.433 5225	9.972 3458	78	10	
14	0	9.538 8804	571	9.566 5424	649	0.433 4576	9.972 3380	78	0	46
	10	9.538 9375	571	9.566 6073	649	0.433 3927	9.972 3302	77	50	
	20	9.538 9946	571	9.566 6722	648	0.433 3278	9.972 3225	78	40	
	30	9.539 0517	571	9.566 7370	649	0.433 2630	9.972 3147	77	30	
	40	9.539 1088	571	9.566 8019	648	0.433 1981	9.972 3070	78	20	
	50	9.539 1659	571	9.566 8667	649	0.433 1333	9.972 2992	78	10	
15	0	9.539 2230	571	9.566 9316	648	0.433 0684	9.972 2914	78	0	45
	10	9.539 2801	570	9.566 9964	649	0.433 0036	9.972 2836	77	50	
	20	9.539 3371	571	9.567 0613	648	0.432 9387	9.972 2759	78	40	
	30	9.539 3942	570	9.567 1261	648	0.432 8739	9.972 2681	78	30	
	40	9.539 4512	571	9.567 1909	648	0.432 8091	9.972 2603	77	20	
	50	9.539 5083	570	9.567 2557	648	0.432 7443	9.972 2526	78	10	
16	0	9.539 5653	570	9.567 3205	648	0.432 6795	9.972 2448	78	0	44
	10	9.539 6223	570	9.567 3853	648	0.432 6147	9.972 2370	78	50	
	20	9.539 6793	570	9.567 4501	647	0.432 5499	9.972 2292	77	40	
	30	9.539 7363	570	9.567 5148	648	0.432 4852	9.972 2215	78	30	
	40	9.539 7933	570	9.567 5796	648	0.432 4204	9.972 2137	78	20	
	50	9.539 8503	570	9.567 6444	647	0.432 3556	9.972 2059	78	10	
17	0	9.539 9073	569	9.567 7091	648	0.432 2909	9.972 1981	78	0	43
	10	9.539 9642	570	9.567 7739	647	0.432 2261	9.972 1903	77	50	
	20	9.540 0212	569	9.567 8386	648	0.432 1614	9.972 1826	78	40	
	30	9.540 0781	570	9.567 9034	647	0.432 0966	9.972 1748	78	30	
	40	9.540 1351	569	9.567 9681	647	0.432 0319	9.972 1670	78	20	
	50	9.540 1920	569	9.568 0328	647	0.431 9672	9.972 1592	78	10	
18	0	9.540 2489	569	9.568 0975	647	0.431 9025	9.972 1514	78	0	42
	10	9.540 3058	570	9.568 1622	647	0.431 8378	9.972 1436	78	50	
	20	9.540 3628	569	9.568 2269	647	0.431 7731	9.972 1358	78	40	
	30	9.540 4197	568	9.568 2916	647	0.431 7084	9.972 1280	78	30	
	40	9.540 4765	569	9.568 3563	647	0.431 6437	9.972 1202	77	20	
	50	9.540 5334	569	9.568 4210	646	0.431 5790	9.972 1125	78	10	
19	0	9.540 5903	569	9.568 4856	647	0.431 5144	9.972 1047	78	0	41
	10	9.540 6472	568	9.568 5503	646	0.431 4497	9.972 0969	78	50	
	20	9.540 7040	569	9.568 6149	647	0.431 3851	9.972 0891	78	40	
	30	9.540 7609	568	9.568 6796	646	0.431 3204	9.972 0813	78	30	
	40	9.540 8177	568	9.568 7442	647	0.431 2558	9.972 0735	78	20	
	50	9.540 8745	569	9.568 8089	646	0.431 1911	9.972 0657	78	10	
20	0	9.540 9314		9.568 8735		0.431 1265	9.972 0579		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

69°

	649
1	64.9
2	129.8
3	194.7
4	259.6
5	324.5
6	389.4
7	454.3
8	519.2
9	584.1

	647
1	64.7
2	129.4
3	194.1
4	258.8
5	323.5
6	388.2
7	452.9
8	517.6
9	582.3

	573
1	57.3
2	114.6
3	171.9
4	229.2
5	286.5
6	343.8
7	401.1
8	458.4
9	515.7

	571
1	57.1
2	114.2
3	171.3
4	228.4
5	285.5
6	342.6
7	399.7
8	456.8
9	513.9

	569
1	56.9
2	113.8
3	170.7
4	227.6
5	284.5
6	341.4
7	398.3
8	455.2
9	512.1

	78
1	7.8
2	15.6
3	23.4
4	31.2
5	39.0
6	46.8
7	54.6
8	62.4
9	70.2

20°

645	
1	64.5
2	129.0
3	193.5
4	258.0
5	322.5
6	387.0
7	451.5
8	516.0
9	580.5

643	
1	64.3
2	128.6
3	192.9
4	257.2
5	321.5
6	385.8
7	450.1
8	514.4
9	578.7

568	
1	56.8
2	113.6
3	170.4
4	227.2
5	284.0
6	340.8
7	397.6
8	454.4
9	511.2

566	
1	56.6
2	113.2
3	169.8
4	226.4
5	283.0
6	339.6
7	396.2
8	452.8
9	509.4

564	
1	56.4
2	112.8
3	169.2
4	225.6
5	282.0
6	338.4
7	394.8
8	451.2
9	507.6

78	
1	7.8
2	15.6
3	23.4
4	31.2
5	39.0
6	46.8
7	54.6
8	62.4
9	70.2

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.540 9314	568	9.568 8735	646	0.431 1265	9.972 0579	78	0	40
	10	9.540 9882	568	9.568 9381	646	0.431 0619	9.972 0501	78	50	
	20	9.541 0450	568	9.569 0027	646	0.430 9973	9.972 0423	78	40	
	30	9.541 1018	568	9.569 0673	646	0.430 9327	9.972 0345	79	30	
	40	9.541 1586	567	9.569 1319	646	0.430 8681	9.972 0266	78	20	
	50	9.541 2153	568	9.569 1965	646	0.430 8035	9.972 0188	78	10	
21	0	9.541 2721	568	9.569 2611	646	0.430 7389	9.972 0110	78	0	39
	10	9.541 3289	567	9.569 3257	645	0.430 6743	9.972 0032	78	50	
	20	9.541 3856	568	9.569 3902	646	0.430 6098	9.971 9954	78	40	
	30	9.541 4424	567	9.569 4548	645	0.430 5452	9.971 9876	78	30	
	40	9.541 4991	567	9.569 5193	646	0.430 4807	9.971 9798	78	20	
	50	9.541 5558	568	9.569 5839	645	0.430 4161	9.971 9720	78	10	
22	0	9.541 6126	567	9.569 6484	645	0.430 3516	9.971 9642	79	0	38
	10	9.541 6693	567	9.569 7129	646	0.430 2871	9.971 9563	78	50	
	20	9.541 7260	567	9.569 7775	645	0.430 2225	9.971 9485	78	40	
	30	9.541 7827	567	9.569 8420	645	0.430 1580	9.971 9407	78	30	
	40	9.541 8394	566	9.569 9065	645	0.430 0935	9.971 9329	78	20	
	50	9.541 8960	567	9.569 9710	645	0.430 0290	9.971 9251	79	10	
23	0	9.541 9527	567	9.570 0355	645	0.429 9645	9.971 9172	78	0	37
	10	9.542 0094	566	9.570 1000	644	0.429 9000	9.971 9094	78	50	
	20	9.542 0660	567	9.570 1644	645	0.429 8356	9.971 9016	78	40	
	30	9.542 1227	566	9.570 2289	645	0.429 7711	9.971 8938	79	30	
	40	9.542 1793	566	9.570 2934	644	0.429 7066	9.971 8859	78	20	
	50	9.542 2359	567	9.570 3578	645	0.429 6422	9.971 8781	78	10	
24	0	9.542 2926	566	9.570 4223	644	0.429 5777	9.971 8703	79	0	36
	10	9.542 3492	566	9.570 4867	645	0.429 5133	9.971 8624	78	50	
	20	9.542 4058	566	9.570 5512	644	0.429 4488	9.971 8546	78	40	
	30	9.542 4624	566	9.570 6156	644	0.429 3844	9.971 8468	79	30	
	40	9.542 5190	565	9.570 6800	644	0.429 3200	9.971 8389	78	20	
	50	9.542 5755	566	9.570 7444	644	0.429 2556	9.971 8311	78	10	
25	0	9.542 6321	566	9.570 8088	644	0.429 1912	9.971 8233	79	0	35
	10	9.542 6887	565	9.570 8732	644	0.429 1268	9.971 8154	78	50	
	20	9.542 7452	566	9.570 9376	644	0.429 0624	9.971 8076	78	40	
	30	9.542 8018	565	9.571 0020	644	0.428 9980	9.971 7998	79	30	
	40	9.542 8583	565	9.571 0664	644	0.428 9336	9.971 7919	78	20	
	50	9.542 9148	565	9.571 1308	643	0.428 8692	9.971 7841	79	10	
26	0	9.542 9713	566	9.571 1951	644	0.428 8049	9.971 7762	78	0	34
	10	9.543 0279	565	9.571 2595	643	0.428 7405	9.971 7684	79	50	
	20	9.543 0844	564	9.571 3238	644	0.428 6762	9.971 7605	78	40	
	30	9.543 1408	565	9.571 3882	643	0.428 6118	9.971 7527	79	30	
	40	9.543 1973	565	9.571 4525	643	0.428 5475	9.971 7448	78	20	
	50	9.543 2538	565	9.571 5168	643	0.428 4832	9.971 7370	79	10	
27	0	9.543 3103	564	9.571 5811	644	0.428 4189	9.971 7291	78	0	33
	10	9.543 3667	565	9.571 6455	643	0.428 3545	9.971 7213	79	50	
	20	9.543 4232	564	9.571 7098	643	0.428 2902	9.971 7134	78	40	
	30	9.543 4796	565	9.571 7741	643	0.428 2259	9.971 7056	79	30	
	40	9.543 5361	564	9.571 8384	642	0.428 1616	9.971 6977	78	20	
	50	9.543 5925	564	9.571 9026	643	0.428 0974	9.971 6899	79	10	
28	0	9.543 6489	564	9.571 9669	643	0.428 0331	9.971 6820	79	0	32
	10	9.543 7053	564	9.572 0312	642	0.427 9688	9.971 6741	78	50	
	20	9.543 7617	564	9.572 0954	643	0.427 9046	9.971 6663	79	40	
	30	9.543 8181	564	9.572 1597	642	0.427 8403	9.971 6584	78	30	
	40	9.543 8745	564	9.572 2239	643	0.427 7761	9.971 6506	79	20	
	50	9.543 9309	564	9.572 2882	642	0.427 7118	9.971 6427	79	10	
29	0	9.543 9873	563	9.572 3524	642	0.427 6476	9.971 6348	78	0	31
	10	9.544 0436	564	9.572 4166	643	0.427 5834	9.971 6270	79	50	
	20	9.544 1000	563	9.572 4809	642	0.427 5191	9.971 6191	79	40	
	30	9.544 1563	563	9.572 5451	642	0.427 4549	9.971 6112	78	30	
	40	9.544 2126	564	9.572 6093	642	0.427 3907	9.971 6034	79	20	
	50	9.544 2690	563	9.572 6735	642	0.427 3265	9.971 5955	79	10	
30	0	9.544 3253		9.572 7377		0.427 2623	9.971 5876		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

69°

20°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.544 3253	563	9.572 7377	642	0.427 2623	9.971 5876	78	0	30
	10	9.544 3816	563	9.572 8019	641	0.427 1981	9.971 5798	79	50	
	20	9.544 4379	563	9.572 8660	642	0.427 1340	9.971 5719	79	40	
	30	9.544 4942	563	9.572 9302	642	0.427 0698	9.971 5640	79	30	
	40	9.544 5505	563	9.572 9944	641	0.427 0056	9.971 5561	78	20	
	50	9.544 6068	562	9.573 0585	642	0.426 9415	9.971 5483	79	10	
31	0	9.544 6630	563	9.573 1227	641	0.426 8773	9.971 5404	79	0	29
	10	9.544 7193	562	9.573 1868	641	0.426 8132	9.971 5325	79	50	
	20	9.544 7755	563	9.573 2509	642	0.426 7491	9.971 5246	79	40	
	30	9.544 8318	562	9.573 3151	641	0.426 6849	9.971 5167	79	30	
	40	9.544 8880	563	9.573 3792	641	0.426 6208	9.971 5088	78	20	
	50	9.544 9443	562	9.573 4433	641	0.426 5567	9.971 5010	79	10	
32	0	9.545 0005	562	9.573 5074	641	0.426 4926	9.971 4931	79	0	28
	10	9.545 0567	562	9.573 5715	641	0.426 4285	9.971 4852	79	50	
	20	9.545 1129	562	9.573 6356	641	0.426 3644	9.971 4773	79	40	
	30	9.545 1691	562	9.573 6997	640	0.426 3003	9.971 4694	79	30	
	40	9.545 2253	561	9.573 7637	641	0.426 2363	9.971 4615	79	20	
	50	9.545 2814	562	9.573 8278	641	0.426 1722	9.971 4536	79	10	
33	0	9.545 3376	562	9.573 8919	640	0.426 1081	9.971 4457	79	0	27
	10	9.545 3938	561	9.573 9559	641	0.426 0441	9.971 4378	79	50	
	20	9.545 4499	562	9.574 0200	640	0.425 9800	9.971 4299	78	40	
	30	9.545 5061	561	9.574 0840	641	0.425 9160	9.971 4221	79	30	
	40	9.545 5622	561	9.574 1481	640	0.425 8519	9.971 4142	79	20	
	50	9.545 6183	562	9.574 2121	640	0.425 7879	9.971 4063	79	10	
34	0	9.545 6745	561	9.574 2761	640	0.425 7239	9.971 3984	79	0	26
	10	9.545 7306	561	9.574 3401	640	0.425 6599	9.971 3905	79	50	
	20	9.545 7867	561	9.574 4041	640	0.425 5959	9.971 3826	79	40	
	30	9.545 8428	561	9.574 4681	640	0.425 5319	9.971 3747	80	30	
	40	9.545 8989	560	9.574 5321	640	0.425 4679	9.971 3667	79	20	
	50	9.545 9549	561	9.574 5961	640	0.425 4039	9.971 3588	79	10	
35	0	9.546 0110	561	9.574 6601	639	0.425 3399	9.971 3509	79	0	25
	10	9.546 0671	560	9.574 7240	640	0.425 2760	9.971 3430	79	50	
	20	9.546 1231	561	9.574 7880	640	0.425 2120	9.971 3351	79	40	
	30	9.546 1792	560	9.574 8520	639	0.425 1480	9.971 3272	79	30	
	40	9.546 2352	560	9.574 9159	639	0.425 0841	9.971 3193	79	20	
	50	9.546 2912	560	9.574 9798	640	0.425 0202	9.971 3114	79	10	
36	0	9.546 3472	561	9.575 0438	639	0.424 9562	9.971 3035	79	0	24
	10	9.546 4033	560	9.575 1077	639	0.424 8923	9.971 2956	80	50	
	20	9.546 4593	560	9.575 1716	639	0.424 8284	9.971 2876	79	40	
	30	9.546 5153	559	9.575 2355	639	0.424 7645	9.971 2797	79	30	
	40	9.546 5712	560	9.575 2994	639	0.424 7006	9.971 2718	79	20	
	50	9.546 6272	560	9.575 3633	639	0.424 6367	9.971 2639	79	10	
37	0	9.546 6832	560	9.575 4272	639	0.424 5728	9.971 2560	80	0	23
	10	9.546 7392	559	9.575 4911	639	0.424 5089	9.971 2480	79	50	
	20	9.546 7951	560	9.575 5550	639	0.424 4450	9.971 2401	79	40	
	30	9.546 8511	559	9.575 6189	638	0.424 3811	9.971 2322	79	30	
	40	9.546 9070	559	9.575 6827	639	0.424 3173	9.971 2243	80	20	
	50	9.546 9629	560	9.575 7466	638	0.424 2534	9.971 2163	79	10	
38	0	9.547 0189	559	9.575 8104	639	0.424 1896	9.971 2084	79	0	22
	10	9.547 0748	559	9.575 8743	638	0.424 1257	9.971 2005	79	50	
	20	9.547 1307	559	9.575 9381	638	0.424 0619	9.971 1926	80	40	
	30	9.547 1866	559	9.576 0019	639	0.423 9981	9.971 1846	79	30	
	40	9.547 2425	558	9.576 0658	638	0.423 9342	9.971 1767	79	20	
	50	9.547 2983	559	9.576 1296	638	0.423 8704	9.971 1688	80	10	
39	0	9.547 3542	559	9.576 1934	638	0.423 8066	9.971 1608	79	0	21
	10	9.547 4101	558	9.576 2572	638	0.423 7428	9.971 1529	79	50	
	20	9.547 4659	559	9.576 3210	638	0.423 6790	9.971 1450	80	40	
	30	9.547 5218	558	9.576 3848	637	0.423 6152	9.971 1370	79	30	
	40	9.547 5776	558	9.576 4485	638	0.423 5515	9.971 1291	80	20	
	50	9.547 6334	559	9.576 5123	638	0.423 4877	9.971 1211	79	10	
40	0	9.547 6893		9.576 5761		0.423 4239	9.971 1132		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

69°

	641
1	64.1
2	128.2
3	192.3
4	256.4
5	320.5
6	384.6
7	448.7
8	512.8
9	576.9

	639
1	63.9
2	127.8
3	191.7
4	255.6
5	319.5
6	383.4
7	447.3
8	511.2
9	575.1

	563
1	56.3
2	112.6
3	168.9
4	225.2
5	281.5
6	337.8
7	394.1
8	450.4
9	506.7

	561
1	56.1
2	112.2
3	168.3
4	224.4
5	280.5
6	336.6
7	392.7
8	448.8
9	504.9

	559
1	55.9
2	111.8
3	167.7
4	223.6
5	279.5
6	335.4
7	391.3
8	447.2
9	503.1

	79
1	7.9
2	15.8
3	23.7
4	31.6
5	39.5
6	47.4
7	55.3
8	63.2
9	71.1

20°

	638
1	63.8
2	127.6
3	191.4
4	255.2
5	319.0
6	382.8
7	446.6
8	510.4
9	574.2

	635
1	63.5
2	127.0
3	190.5
4	254.0
5	317.5
6	381.0
7	444.5
8	508.0
9	571.5

	558
1	55.8
2	111.6
3	167.4
4	223.2
5	279.0
6	334.8
7	390.6
8	446.4
9	502.2

	556
1	55.6
2	111.2
3	166.8
4	222.4
5	278.0
6	333.6
7	389.2
8	444.8
9	500.4

	554
1	55.4
2	110.8
3	166.2
4	221.6
5	277.0
6	332.4
7	387.8
8	443.2
9	498.6

	80
1	8.0
2	16.0
3	24.0
4	32.0
5	40.0
6	48.0
7	56.0
8	64.0
9	72.0

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.547 6893	558	9.576 5761	637	0.423 4239	9.971 1132	79	0	20
	10	9.547 7451	558	9.576 6398	638	0.423 3602	9.971 1053	80	50	
	20	9.547 8009	558	9.576 7036	637	0.423 2964	9.971 0973	79	40	
	30	9.547 8567	558	9.576 7673	638	0.423 2327	9.971 0894	80	30	
	40	9.547 9125	558	9.576 8311	637	0.423 1689	9.971 0814	79	20	
	50	9.547 9683	557	9.576 8948	637	0.423 1052	9.971 0735	80	10	
41	0	9.548 0240	558	9.576 9585	637	0.423 0415	9.971 0655	79	0	19
	10	9.548 0798	558	9.577 0222	637	0.422 9778	9.971 0576	80	50	
	20	9.548 1356	557	9.577 0859	637	0.422 9141	9.971 0496	79	40	
	30	9.548 1913	558	9.577 1496	637	0.422 8504	9.971 0417	80	30	
	40	9.548 2471	557	9.577 2133	637	0.422 7867	9.971 0337	79	20	
	50	9.548 3028	557	9.577 2770	637	0.422 7230	9.971 0258	80	10	
42	0	9.548 3585	557	9.577 3407	637	0.422 6593	9.971 0178	79	0	18
	10	9.548 4142	557	9.577 4044	636	0.422 5956	9.971 0099	80	50	
	20	9.548 4699	557	9.577 4680	637	0.422 5320	9.971 0019	80	40	
	30	9.548 5256	557	9.577 5317	637	0.422 4683	9.970 9939	79	30	
	40	9.548 5813	557	9.577 5954	636	0.422 4046	9.970 9860	80	20	
	50	9.548 6370	557	9.577 6590	636	0.422 3410	9.970 9780	79	10	
43	0	9.548 6927	557	9.577 7226	637	0.422 2774	9.970 9701	80	0	17
	10	9.548 7484	556	9.577 7863	636	0.422 2137	9.970 9621	80	50	
	20	9.548 8040	557	9.577 8499	636	0.422 1501	9.970 9541	79	40	
	30	9.548 8597	556	9.577 9135	636	0.422 0865	9.970 9462	80	30	
	40	9.548 9153	556	9.577 9771	636	0.422 0229	9.970 9382	80	20	
	50	9.548 9709	557	9.578 0407	636	0.421 9593	9.970 9302	79	10	
44	0	9.549 0266	556	9.578 1043	636	0.421 8957	9.970 9223	80	0	16
	10	9.549 0822	556	9.578 1679	636	0.421 8321	9.970 9143	80	50	
	20	9.549 1378	556	9.578 2315	636	0.421 7685	9.970 9063	80	40	
	30	9.549 1934	556	9.578 2951	635	0.421 7049	9.970 8983	79	30	
	40	9.549 2490	556	9.578 3586	636	0.421 6414	9.970 8904	80	20	
	50	9.549 3046	556	9.578 4222	636	0.421 5778	9.970 8824	80	10	
45	0	9.549 3602	555	9.578 4858	635	0.421 5142	9.970 8744	80	0	15
	10	9.549 4157	556	9.578 5493	635	0.421 4507	9.970 8664	79	50	
	20	9.549 4713	556	9.578 6128	636	0.421 3872	9.970 8585	80	40	
	30	9.549 5269	555	9.578 6764	635	0.421 3236	9.970 8505	80	30	
	40	9.549 5824	555	9.578 7399	635	0.421 2601	9.970 8425	80	20	
	50	9.549 6379	556	9.578 8034	635	0.421 1966	9.970 8345	80	10	
46	0	9.549 6935	555	9.578 8669	635	0.421 1331	9.970 8265	80	0	14
	10	9.549 7490	555	9.578 9304	635	0.421 0696	9.970 8185	79	50	
	20	9.549 8045	555	9.578 9939	635	0.421 0061	9.970 8106	80	40	
	30	9.549 8600	555	9.579 0574	635	0.420 9426	9.970 8026	80	30	
	40	9.549 9155	555	9.579 1209	635	0.420 8791	9.970 7946	80	20	
	50	9.549 9710	555	9.579 1844	635	0.420 8156	9.970 7866	80	10	
47	0	9.550 0265	554	9.579 2479	634	0.420 7521	9.970 7786	80	0	13
	10	9.550 0819	555	9.579 3113	635	0.420 6887	9.970 7706	80	50	
	20	9.550 1374	555	9.579 3748	634	0.420 6252	9.970 7626	80	40	
	30	9.550 1929	554	9.579 4382	635	0.420 5618	9.970 7546	80	30	
	40	9.550 2483	555	9.579 5017	634	0.420 4983	9.970 7466	80	20	
	50	9.550 3038	554	9.579 5651	635	0.420 4349	9.970 7386	80	10	
48	0	9.550 3592	554	9.579 6286	634	0.420 3714	9.970 7306	80	0	12
	10	9.550 4146	554	9.579 6920	634	0.420 3080	9.970 7226	80	50	
	20	9.550 4700	554	9.579 7554	634	0.420 2446	9.970 7146	80	40	
	30	9.550 5254	554	9.579 8188	634	0.420 1812	9.970 7066	80	30	
	40	9.550 5808	554	9.579 8822	634	0.420 1178	9.970 6986	80	20	
	50	9.550 6362	554	9.579 9456	634	0.420 0544	9.970 6906	80	10	
49	0	9.550 6916	554	9.580 0090	634	0.419 9910	9.970 6826	80	0	11
	10	9.550 7470	554	9.580 0724	633	0.419 9276	9.970 6746	80	50	
	20	9.550 8024	553	9.580 1357	634	0.419 8643	9.970 6666	80	40	
	30	9.550 8577	554	9.580 1991	634	0.419 8009	9.970 6586	80	30	
	40	9.550 9131	553	9.580 2625	633	0.419 7375	9.970 6506	80	20	
	50	9.550 9684	553	9.580 3258	634	0.419 6742	9.970 6426	80	10	
50	0	9.551 0237		9.580 3892		0.419 6108	9.970 6346		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

20°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.551 0237	554	9.580 3892	633	0.419 6108	9.970 6346	80	0	10
	10	9.551 0791	553	9.580 4525	633	0.419 5475	9.970 6266	81	50	
	20	9.551 1344	553	9.580 5158	634	0.419 4842	9.970 6185	80	40	
	30	9.551 1897	553	9.580 5792	633	0.419 4208	9.970 6105	80	30	
	40	9.551 2450	553	9.580 6425	633	0.419 3575	9.970 6025	80	20	
	50	9.551 3003	553	9.580 7058	633	0.419 2942	9.970 5945	80	10	
51	0	9.551 3556	553	9.580 7691	633	0.419 2309	9.970 5865	80	0	9
	10	9.551 4109	552	9.580 8324	633	0.419 1676	9.970 5785	81	50	
	20	9.551 4661	553	9.580 8957	633	0.419 1043	9.970 5704	80	40	
	30	9.551 5214	553	9.580 9590	633	0.419 0410	9.970 5624	80	30	
	40	9.551 5767	552	9.581 0223	632	0.418 9777	9.970 5544	80	20	
	50	9.551 6319	552	9.581 0855	633	0.418 9145	9.970 5464	81	10	
52	0	9.551 6871	553	9.581 1488	633	0.418 8512	9.970 5383	80	0	8
	10	9.551 7424	552	9.581 2121	632	0.418 7879	9.970 5303	80	50	
	20	9.551 7976	552	9.581 2753	632	0.418 7247	9.970 5223	80	40	
	30	9.551 8528	552	9.581 3385	633	0.418 6615	9.970 5143	81	30	
	40	9.551 9080	552	9.581 4018	632	0.418 5982	9.970 5062	80	20	
	50	9.551 9632	552	9.581 4650	632	0.418 5350	9.970 4982	80	10	
53	0	9.552 0184	552	9.581 5282	633	0.418 4718	9.970 4902	81	0	7
	10	9.552 0736	552	9.581 5915	632	0.418 4085	9.970 4821	80	50	
	20	9.552 1288	551	9.581 6547	632	0.418 3453	9.970 4741	80	40	
	30	9.552 1839	552	9.581 7179	632	0.418 2821	9.970 4661	81	30	
	40	9.552 2391	551	9.581 7811	631	0.418 2189	9.970 4580	80	20	
	50	9.552 2942	552	9.581 8442	632	0.418 1558	9.970 4500	81	10	
54	0	9.552 3494	551	9.581 9074	632	0.418 0926	9.970 4419	80	0	6
	10	9.552 4045	551	9.581 9706	632	0.418 0294	9.970 4339	80	50	
	20	9.552 4596	552	9.582 0338	631	0.417 9662	9.970 4259	81	40	
	30	9.552 5148	551	9.582 0969	632	0.417 9031	9.970 4178	80	30	
	40	9.552 5699	551	9.582 1601	631	0.417 8399	9.970 4098	81	20	
	50	9.552 6250	551	9.582 2232	632	0.417 7768	9.970 4017	80	10	
55	0	9.552 6801	550	9.582 2864	631	0.417 7136	9.970 3937	81	0	5
	10	9.552 7351	551	9.582 3495	631	0.417 6505	9.970 3856	80	50	
	20	9.552 7902	551	9.582 4126	632	0.417 5874	9.970 3776	81	40	
	30	9.552 8453	551	9.582 4758	631	0.417 5242	9.970 3695	80	30	
	40	9.552 9004	550	9.582 5389	631	0.417 4611	9.970 3615	81	2c	
	50	9.552 9554	551	9.582 6020	631	0.417 3980	9.970 3534	80	10	
56	0	9.553 0105	550	9.582 6651	631	0.417 3349	9.970 3454	81	0	4
	10	9.553 0655	550	9.582 7282	631	0.417 2718	9.970 3373	80	50	
	20	9.553 1205	550	9.582 7913	630	0.417 2087	9.970 3293	81	40	
	30	9.553 1755	551	9.582 8543	631	0.417 1457	9.970 3212	80	30	
	40	9.553 2306	550	9.582 9174	631	0.417 0826	9.970 3132	81	20	
	50	9.553 2856	550	9.582 9805	630	0.417 0195	9.970 3051	81	10	
57	0	9.553 3406	550	9.583 0435	631	0.416 9565	9.970 2970	80	0	3
	10	9.553 3956	549	9.583 1066	630	0.416 8934	9.970 2890	81	50	
	20	9.553 4505	550	9.583 1696	631	0.416 8304	9.970 2809	81	40	
	30	9.553 5055	550	9.583 2327	630	0.416 7673	9.970 2728	80	30	
	40	9.553 5605	549	9.583 2957	630	0.416 7043	9.970 2648	81	20	
	50	9.553 6154	550	9.583 3587	630	0.416 6413	9.970 2567	81	10	
58	0	9.553 6704	549	9.583 4217	631	0.416 5783	9.970 2486	80	0	2
	10	9.553 7253	550	9.583 4848	630	0.416 5152	9.970 2406	81	50	
	20	9.553 7803	549	9.583 5478	630	0.416 4522	9.970 2325	81	40	
	30	9.553 8352	549	9.583 6108	629	0.416 3892	9.970 2244	80	30	
	40	9.553 8901	549	9.583 6737	630	0.416 3263	9.970 2164	81	20	
	50	9.553 9450	549	9.583 7367	630	0.416 2633	9.970 2083	81	10	
59	0	9.553 9999	549	9.583 7997	630	0.416 2003	9.970 2002	81	0	1
	10	9.554 0548	549	9.583 8627	629	0.416 1373	9.970 1921	80	50	
	20	9.554 1097	549	9.583 9256	630	0.416 0744	9.970 1841	81	40	
	30	9.554 1646	548	9.583 9886	629	0.416 0114	9.970 1760	81	30	
	40	9.554 2194	549	9.584 0515	630	0.415 9485	9.970 1679	81	20	
	50	9.554 2743	549	9.584 1145	629	0.415 8855	9.970 1598	81	10	
60	0	9.554 3292		9.584 1774		0.415 8226	9.970 1517		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

69°

	632	629	552	550	548	81
1	63.2	62.9	55.2	55.0	54.8	8.1
2	126.4	125.8	110.4	110.0	109.6	16.2
3	189.6	188.7	165.6	165.0	164.4	24.3
4	252.8	251.6	220.8	220.0	219.2	32.4
5	316.0	314.5	276.0	275.0	274.0	40.5
6	379.2	377.4	331.2	330.0	328.8	48.6
7	442.4	440.3	386.4	385.0	383.6	56.7
8	505.6	503.2	441.6	440.0	438.4	64.8
9	568.8	566.1	496.8	495.0	493.2	72.9

629	
1	62.9
2	125.8
3	188.7
4	251.6
5	314.5
6	377.4
7	440.3
8	503.2
9	566.1

627	
1	62.7
2	125.4
3	188.1
4	250.8
5	313.5
6	376.2
7	438.9
8	501.6
9	564.3

625	
1	62.5
2	125.0
3	187.5
4	250.0
5	312.5
6	375.0
7	437.5
8	500.0
9	562.5

548	
1	54.8
2	109.6
3	164.4
4	219.2
5	274.0
6	328.8
7	383.6
8	438.4
9	493.2

546	
1	54.6
2	109.2
3	163.8
4	218.4
5	273.0
6	327.6
7	382.2
8	436.8
9	491.4

81	
1	8.1
2	16.2
3	24.3
4	32.4
5	40.5
6	48.6
7	56.7
8	64.8
9	72.9

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.554 3292	548	9.584 1774	630	0.415 8226	9.970 1517	80	0	60
	10	9.554 3840	548	9.584 2404	629	0.415 7596	9.970 1437	81	50	
	20	9.554 4388	549	9.584 3033	629	0.415 6967	9.970 1356	81	40	
	30	9.554 4937	548	9.584 3662	629	0.415 6338	9.970 1275	81	30	
	40	9.554 5485	548	9.584 4291	629	0.415 5709	9.970 1194	81	20	
	50	9.554 6033	548	9.584 4920	629	0.415 5080	9.970 1113	81	10	
1	0	9.554 6581	548	9.584 5549	629	0.415 4451	9.970 1032	81	0	59
	10	9.554 7129	548	9.584 6178	629	0.415 3822	9.970 0951	81	50	
	20	9.554 7677	548	9.584 6807	628	0.415 3193	9.970 0870	81	40	
	30	9.554 8225	548	9.584 7435	629	0.415 2565	9.970 0789	80	30	
	40	9.554 8773	547	9.584 8064	629	0.415 1936	9.970 0709	81	20	
	50	9.554 9320	548	9.584 8693	628	0.415 1307	9.970 0628	81	10	
2	0	9.554 9868	547	9.584 9321	629	0.415 0679	9.970 0547	81	0	58
	10	9.555 0415	548	9.584 9950	628	0.415 0050	9.970 0466	81	50	
	20	9.555 0963	547	9.585 0578	629	0.414 9422	9.970 0385	81	40	
	30	9.555 1510	548	9.585 1207	628	0.414 8793	9.970 0304	81	30	
	40	9.555 2058	547	9.585 1835	628	0.414 8165	9.970 0223	81	20	
	50	9.555 2605	547	9.585 2463	628	0.414 7537	9.970 0142	81	10	
3	0	9.555 3152	547	9.585 3091	628	0.414 6909	9.970 0061	81	0	57
	10	9.555 3699	547	9.585 3719	628	0.414 6281	9.969 9980	81	50	
	20	9.555 4246	547	9.585 4347	628	0.414 5653	9.969 9899	81	40	
	30	9.555 4793	547	9.585 4975	628	0.414 5025	9.969 9818	82	30	
	40	9.555 5340	546	9.585 5603	628	0.414 4397	9.969 9736	81	20	
	50	9.555 5886	547	9.585 6231	628	0.414 3769	9.969 9655	81	10	
4	0	9.555 6433	546	9.585 6859	627	0.414 3141	9.969 9574	81	0	56
	10	9.555 6979	547	9.585 7486	628	0.414 2514	9.969 9493	81	50	
	20	9.555 7526	546	9.585 8114	628	0.414 1886	9.969 9412	81	40	
	30	9.555 8072	547	9.585 8742	627	0.414 1258	9.969 9331	81	30	
	40	9.555 8619	546	9.585 9369	627	0.414 0631	9.969 9250	81	20	
	50	9.555 9165	546	9.585 9996	628	0.414 0004	9.969 9169	82	10	
5	0	9.555 9711	546	9.586 0624	627	0.413 9376	9.969 9087	81	0	55
	10	9.556 0257	546	9.586 1251	627	0.413 8749	9.969 9006	81	50	
	20	9.556 0803	546	9.586 1878	627	0.413 8122	9.969 8925	81	40	
	30	9.556 1349	546	9.586 2505	627	0.413 7495	9.969 8844	81	30	
	40	9.556 1895	546	9.586 3132	627	0.413 6868	9.969 8763	82	20	
	50	9.556 2441	546	9.586 3759	627	0.413 6241	9.969 8681	81	10	
6	0	9.556 2987	545	9.586 4386	627	0.413 5614	9.969 8600	81	0	54
	10	9.556 3532	546	9.586 5013	627	0.413 4987	9.969 8519	81	50	
	20	9.556 4078	545	9.586 5640	627	0.413 4360	9.969 8438	82	40	
	30	9.556 4623	546	9.586 6267	626	0.413 3733	9.969 8356	81	30	
	40	9.556 5169	545	9.586 6893	627	0.413 3107	9.969 8275	81	20	
	50	9.556 5714	545	9.586 7520	627	0.413 2480	9.969 8194	82	10	
7	0	9.556 6259	545	9.586 8147	626	0.413 1853	9.969 8112	81	0	53
	10	9.556 6804	545	9.586 8773	626	0.413 1227	9.969 8031	81	50	
	20	9.556 7349	545	9.586 9399	627	0.413 0601	9.969 7950	82	40	
	30	9.556 7894	545	9.587 0026	626	0.412 9974	9.969 7868	81	30	
	40	9.556 8439	545	9.587 0652	626	0.412 9348	9.969 7787	81	20	
	50	9.556 8984	545	9.587 1278	626	0.412 8722	9.969 7706	82	10	
8	0	9.556 9529	544	9.587 1904	626	0.412 8096	9.969 7624	81	0	52
	10	9.557 0073	545	9.587 2530	626	0.412 7470	9.969 7543	81	50	
	20	9.557 0618	545	9.587 3156	626	0.412 6844	9.969 7462	82	40	
	30	9.557 1163	544	9.587 3782	626	0.412 6218	9.969 7380	81	30	
	40	9.557 1707	544	9.587 4408	626	0.412 5592	9.969 7299	82	20	
	50	9.557 2251	545	9.587 5034	626	0.412 4966	9.969 7217	81	10	
9	0	9.557 2796	544	9.587 5660	625	0.412 4340	9.969 7136	82	0	51
	10	9.557 3340	544	9.587 6285	626	0.412 3715	9.969 7054	81	50	
	20	9.557 3884	544	9.587 6911	626	0.412 3089	9.969 6973	82	40	
	30	9.557 4428	544	9.587 7537	625	0.412 2463	9.969 6891	81	30	
	40	9.557 4972	544	9.587 8162	625	0.412 1838	9.969 6810	82	20	
	50	9.557 5516	544	9.587 8787	626	0.412 1213	9.969 6728	81	10	
10	0	9.557 6060		9.587 9413		0.412 0587	9.969 6647		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

68°

21°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.557 6060	543	9.587 9413	625	0.412 0587	9.969 6647	82	0	50
	10	9.557 6603	544	9.588 0038	625	0.411 9962	9.969 6565	81	50	
	20	9.557 7147	544	9.588 0663	625	0.411 9337	9.969 6484	82	40	
	30	9.557 7691	543	9.588 1288	625	0.411 8712	9.969 6402	81	30	
	40	9.557 8234	544	9.588 1913	625	0.411 8087	9.969 6321	82	20	
	50	9.557 8778	543	9.588 2538	625	0.411 7462	9.969 6239	81	10	
11	0	9.557 9321	543	9.588 3163	625	0.411 6837	9.969 6158	82	0	49
	10	9.557 9864	543	9.588 3788	625	0.411 6212	9.969 6076	82	50	
	20	9.558 0407	543	9.588 4413	625	0.411 5587	9.969 5994	81	40	
	30	9.558 0950	543	9.588 5038	624	0.411 4962	9.969 5913	82	30	
	40	9.558 1493	543	9.588 5662	625	0.411 4338	9.969 5831	82	20	
	50	9.558 2036	543	9.588 6287	625	0.411 3713	9.969 5749	81	10	
12	0	9.558 2579	543	9.588 6912	624	0.411 3088	9.969 5668	82	0	48
	10	9.558 3122	543	9.588 7536	624	0.411 2464	9.969 5586	82	50	
	20	9.558 3665	542	9.588 8160	625	0.411 1840	9.969 5504	81	40	
	30	9.558 4207	543	9.588 8785	624	0.411 1215	9.969 5423	82	30	
	40	9.558 4750	543	9.588 9409	624	0.411 0591	9.969 5341	82	20	
	50	9.558 5293	542	9.589 0033	624	0.410 9967	9.969 5259	82	10	
13	0	9.558 5835	542	9.589 0657	624	0.410 9343	9.969 5177	81	0	47
	10	9.558 6377	542	9.589 1281	624	0.410 8719	9.969 5096	82	50	
	20	9.558 6919	543	9.589 1905	624	0.410 8095	9.969 5014	82	40	
	30	9.558 7462	542	9.589 2529	624	0.410 7471	9.969 4932	82	30	
	40	9.558 8004	542	9.589 3153	624	0.410 6847	9.969 4850	81	20	
	50	9.558 8546	542	9.589 3777	624	0.410 6223	9.969 4769	82	10	
14	0	9.558 9088	542	9.589 4401	624	0.410 5599	9.969 4687	82	0	46
	10	9.558 9630	541	9.589 5025	623	0.410 4975	9.969 4605	82	50	
	20	9.559 0171	542	9.589 5648	624	0.410 4352	9.969 4523	82	40	
	30	9.559 0713	542	9.589 6272	623	0.410 3728	9.969 4441	81	30	
	40	9.559 1255	541	9.589 6895	624	0.410 3105	9.969 4360	82	20	
	50	9.559 1796	542	9.589 7519	623	0.410 2481	9.969 4278	82	10	
15	0	9.559 2338	541	9.589 8142	623	0.410 1858	9.969 4196	82	0	45
	10	9.559 2879	541	9.589 8765	623	0.410 1235	9.969 4114	82	50	
	20	9.559 3420	542	9.589 9388	624	0.410 0612	9.969 4032	82	40	
	30	9.559 3962	541	9.590 0012	623	0.409 9988	9.969 3950	82	30	
	40	9.559 4503	541	9.590 0635	623	0.409 9365	9.969 3868	82	20	
	50	9.559 5044	541	9.590 1258	623	0.409 8742	9.969 3786	82	10	
16	0	9.559 5585	541	9.590 1881	622	0.409 8119	9.969 3704	82	0	44
	10	9.559 6126	541	9.590 2503	623	0.409 7497	9.969 3622	82	50	
	20	9.559 6667	540	9.590 3126	623	0.409 6874	9.969 3540	82	40	
	30	9.559 7207	541	9.590 3749	623	0.409 6251	9.969 3458	82	30	
	40	9.559 7748	541	9.590 4372	622	0.409 5628	9.969 3376	82	20	
	50	9.559 8289	540	9.590 4994	623	0.409 5006	9.969 3294	82	10	
17	0	9.559 8829	541	9.590 5617	622	0.409 4383	9.969 3212	82	0	43
	10	9.559 9370	540	9.590 6239	623	0.409 3761	9.969 3130	82	50	
	20	9.559 9910	540	9.590 6862	622	0.409 3138	9.969 3048	82	40	
	30	9.560 0450	541	9.590 7484	622	0.409 2516	9.969 2966	82	30	
	40	9.560 0991	540	9.590 8106	623	0.409 1894	9.969 2884	82	20	
	50	9.560 1531	540	9.590 8729	622	0.409 1271	9.969 2802	82	10	
18	0	9.560 2071	540	9.590 9351	622	0.409 0649	9.969 2720	82	0	42
	10	9.560 2611	540	9.590 9973	622	0.409 0027	9.969 2638	82	50	
	20	9.560 3151	540	9.591 0595	622	0.408 9405	9.969 2556	82	40	
	30	9.560 3691	539	9.591 1217	622	0.408 8783	9.969 2474	82	30	
	40	9.560 4230	540	9.591 1839	622	0.408 8161	9.969 2392	83	20	
	50	9.560 4770	540	9.591 2461	621	0.408 7539	9.969 2309	82	10	
19	0	9.560 5310	539	9.591 3082	622	0.408 6918	9.969 2227	82	0	41
	10	9.560 5849	540	9.591 3704	622	0.408 6296	9.969 2145	82	50	
	20	9.560 6389	539	9.591 4326	621	0.408 5674	9.969 2063	82	40	
	30	9.560 6928	539	9.591 4947	622	0.408 5053	9.969 1981	82	30	
	40	9.560 7467	540	9.591 5569	621	0.408 4431	9.969 1899	83	20	
	50	9.560 8007	539	9.591 6190	622	0.408 3810	9.969 1816	82	10	
20	0	9.560 8546		9.591 6812		0.408 3188	9.969 1734		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

68°

	623
1	62.3
2	124.6
3	186.9
4	249.2
5	311.5
6	373.8
7	436.1
8	498.4
9	560.7

	621
1	62.1
2	124.2
3	186.3
4	248.4
5	310.5
6	372.6
7	434.7
8	496.8
9	558.9

	544
1	54.4
2	108.8
3	163.2
4	217.6
5	272.0
6	326.4
7	380.8
8	435.2
9	489.6

	542
1	54.2
2	108.4
3	162.6
4	216.8
5	271.0
6	325.2
7	379.4
8	433.6
9	487.8

	540
1	54.0
2	108.0
3	162.0
4	216.0
5	270.0
6	324.0
7	378.0
8	432.0
9	486.0

	82
1	8.2
2	16.4
3	24.6
4	32.8
5	41.0
6	49.2
7	57.4
8	65.6
9	73.8

21°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.560 8546	539	9.591 6812	621	0.408 3188	9.969 1734	82	0	40
	10	9.560 9085	539	9.591 7433	621	0.408 2567	9.969 1652	82	50	
	20	9.560 9624	539	9.591 8054	621	0.408 1946	9.969 1570	83	40	
	30	9.561 0163	539	9.591 8675	622	0.408 1325	9.969 1487	82	30	
	40	9.561 0702	538	9.591 9297	621	0.408 0703	9.969 1405	82	20	
	50	9.561 1240	539	9.591 9918	621	0.408 0082	9.969 1323	82	10	
21	0	9.561 1779	539	9.592 0539	620	0.407 9461	9.969 1241	83	0	39
	10	9.561 2318	538	9.592 1159	621	0.407 8841	9.969 1158	82	50	
	20	9.561 2856	539	9.592 1780	621	0.407 8220	9.969 1076	82	40	
	30	9.561 3395	538	9.592 2401	621	0.407 7599	9.969 0994	83	30	
	40	9.561 3933	538	9.592 3022	621	0.407 6978	9.969 0911	82	20	
	50	9.561 4471	539	9.592 3643	620	0.407 6357	9.969 0829	83	10	
22	0	9.561 5010	538	9.592 4263	621	0.407 5737	9.969 0746	82	0	38
	10	9.561 5548	538	9.592 4884	620	0.407 5116	9.969 0664	82	50	
	20	9.561 6086	538	9.592 5504	620	0.407 4496	9.969 0582	83	40	
	30	9.561 6624	538	9.592 6124	621	0.407 3876	9.969 0499	82	30	
	40	9.561 7162	538	9.592 6745	620	0.407 3255	9.969 0417	83	20	
	50	9.561 7700	537	9.592 7365	620	0.407 2635	9.969 0334	82	10	
23	0	9.561 8237	538	9.592 7985	620	0.407 2015	9.969 0252	82	0	37
	10	9.561 8775	538	9.592 8605	621	0.407 1395	9.969 0170	83	50	
	20	9.561 9313	537	9.592 9226	620	0.407 0774	9.969 0087	82	40	
	30	9.561 9850	538	9.592 9846	619	0.407 0154	9.969 0005	83	30	
	40	9.562 0388	537	9.593 0465	620	0.406 9535	9.968 9922	82	20	
	50	9.562 0925	537	9.593 1085	620	0.406 8915	9.968 9840	83	10	
24	0	9.562 1462	538	9.593 1705	620	0.406 8295	9.968 9757	82	0	36
	10	9.562 2000	537	9.593 2325	620	0.406 7675	9.968 9675	83	50	
	20	9.562 2537	537	9.593 2945	619	0.406 7055	9.968 9592	82	40	
	30	9.562 3074	537	9.593 3564	620	0.406 6436	9.968 9510	83	30	
	40	9.562 3611	537	9.593 4184	619	0.406 5816	9.968 9427	83	20	
	50	9.562 4148	537	9.593 4803	620	0.406 5197	9.968 9344	82	10	
25	0	9.562 4685	536	9.593 5423	619	0.406 4577	9.968 9262	83	0	35
	10	9.562 5221	537	9.593 6042	619	0.406 3958	9.968 9179	82	50	
	20	9.562 5758	537	9.593 6661	620	0.406 3339	9.968 9097	83	40	
	30	9.562 6295	536	9.593 7281	619	0.406 2719	9.968 9014	83	30	
	40	9.562 6831	537	9.593 7900	619	0.406 2100	9.968 8931	82	20	
	50	9.562 7368	536	9.593 8519	619	0.406 1481	9.968 8849	83	10	
26	0	9.562 7904	536	9.593 9138	619	0.406 0862	9.968 8766	83	0	34
	10	9.562 8440	537	9.593 9757	619	0.406 0243	9.968 8683	82	50	
	20	9.562 8977	536	9.594 0376	619	0.405 9624	9.968 8601	83	40	
	30	9.562 9513	536	9.594 0995	618	0.405 9005	9.968 8518	83	30	
	40	9.563 0049	536	9.594 1613	619	0.405 8387	9.968 8435	82	20	
	50	9.563 0585	536	9.594 2232	619	0.405 7768	9.968 8353	83	10	
27	0	9.563 1121	536	9.594 2851	618	0.405 7149	9.968 8270	83	0	33
	10	9.563 1657	535	9.594 3469	619	0.405 6531	9.968 8187	82	50	
	20	9.563 2192	536	9.594 4088	618	0.405 5912	9.968 8105	83	40	
	30	9.563 2728	536	9.594 4706	619	0.405 5294	9.968 8022	83	30	
	40	9.563 3264	535	9.594 5325	618	0.405 4675	9.968 7939	83	20	
	50	9.563 3799	536	9.594 5943	618	0.405 4057	9.968 7856	83	10	
28	0	9.563 4335	535	9.594 6561	618	0.405 3439	9.968 7773	82	0	32
	10	9.563 4870	535	9.594 7179	619	0.405 2821	9.968 7691	83	50	
	20	9.563 5405	536	9.594 7798	618	0.405 2202	9.968 7608	83	40	
	30	9.563 5941	535	9.594 8416	618	0.405 1584	9.968 7525	83	30	
	40	9.563 6476	535	9.594 9034	618	0.405 0966	9.968 7442	83	20	
	50	9.563 7011	535	9.594 9652	617	0.405 0348	9.968 7359	83	10	
29	0	9.563 7546	535	9.595 0269	618	0.404 9731	9.968 7276	82	0	31
	10	9.563 8081	535	9.595 0887	618	0.404 9113	9.968 7194	83	50	
	20	9.563 8616	534	9.595 1505	618	0.404 8495	9.968 7111	83	40	
	30	9.563 9150	535	9.595 2123	617	0.404 7877	9.968 7028	83	30	
	40	9.563 9685	535	9.595 2740	618	0.404 7260	9.968 6945	83	20	
	50	9.564 0220	534	9.595 3358	617	0.404 6642	9.968 6862	83	10	
30	0	9.564 0754		9.595 3975		0.404 6025	9.968 6779		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

68°

	621
1	62.1
2	124.2
3	186.3
4	248.4
5	310.5
6	372.6
7	434.7
8	496.8
9	558.9

	619
1	61.9
2	123.8
3	185.7
4	247.6
5	309.5
6	371.4
7	433.3
8	495.2
9	557.1

	539
1	53.9
2	107.8
3	161.7
4	215.6
5	269.5
6	323.4
7	377.3
8	431.2
9	485.1

	537
1	53.7
2	107.4
3	161.1
4	214.8
5	268.5
6	322.2
7	375.9
8	429.6
9	483.3

	535
1	53.5
2	107.0
3	160.5
4	214.0
5	267.5
6	321.0
7	374.5
8	428.0
9	481.5

	82
1	8.2
2	16.4
3	24.6
4	32.8
5	41.0
6	49.2
7	57.4
8	65.6
9	73.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.564 0754	535	9.595 3975	618	0.404 6025	9.968 6779	83	0	30
	10	9.564 1289	534	9.595 4593	617	0.404 5407	9.968 6696	83	50	
	20	9.564 1823	535	9.595 5210	617	0.404 4790	9.968 6613	83	40	
	30	9.564 2358	534	9.595 5827	618	0.404 4173	9.968 6530	83	30	
	40	9.564 2892	534	9.595 6445	617	0.404 3555	9.968 6447	83	20	
	50	9.564 3426	534	9.595 7062	617	0.404 2938	9.968 6364	83	10	
31	0	9.564 3960	534	9.595 7679	617	0.404 2321	9.968 6281	83	0	29
	10	9.564 4494	534	9.595 8296	617	0.404 1704	9.968 6198	83	50	
	20	9.564 5028	534	9.595 8913	617	0.404 1087	9.968 6115	83	40	
	30	9.564 5562	534	9.595 9530	617	0.404 0470	9.968 6032	83	30	
	40	9.564 6096	533	9.596 0147	616	0.403 9853	9.968 5949	83	20	
	50	9.564 6629	534	9.596 0763	617	0.403 9237	9.968 5866	83	10	
32	0	9.564 7163	534	9.596 1380	617	0.403 8620	9.968 5783	83	0	28
	10	9.564 7697	533	9.596 1997	616	0.403 8003	9.968 5700	83	50	
	20	9.564 8230	534	9.596 2613	617	0.403 7387	9.968 5617	83	40	
	30	9.564 8764	533	9.596 3230	616	0.403 6770	9.968 5534	84	30	
	40	9.564 9297	533	9.596 3846	617	0.403 6154	9.968 5450	83	20	
	50	9.564 9830	533	9.596 4463	616	0.403 5537	9.968 5367	83	10	
33	0	9.565 0363	533	9.596 5079	616	0.403 4921	9.968 5284	83	0	27
	10	9.565 0896	533	9.596 5695	617	0.403 4305	9.968 5201	83	50	
	20	9.565 1429	533	9.596 6312	616	0.403 3688	9.968 5118	83	40	
	30	9.565 1962	533	9.596 6928	616	0.403 3072	9.968 5035	83	30	
	40	9.565 2495	533	9.596 7544	616	0.403 2456	9.968 4952	84	20	
	50	9.565 3028	533	9.596 8160	616	0.403 1840	9.968 4868	83	10	
34	0	9.565 3561	533	9.596 8776	616	0.403 1224	9.968 4785	83	0	26
	10	9.565 4094	532	9.596 9392	616	0.403 0608	9.968 4702	83	50	
	20	9.565 4626	533	9.597 0008	615	0.402 9992	9.968 4619	84	40	
	30	9.565 5159	532	9.597 0623	616	0.402 9377	9.968 4535	83	30	
	40	9.565 5691	532	9.597 1239	616	0.402 8761	9.968 4452	83	20	
	50	9.565 6223	533	9.597 1855	615	0.402 8145	9.968 4369	83	10	
35	0	9.565 6756	532	9.597 2470	616	0.402 7530	9.968 4286	84	0	25
	10	9.565 7288	532	9.597 3086	615	0.402 6914	9.968 4202	83	50	
	20	9.565 7820	532	9.597 3701	616	0.402 6299	9.968 4119	83	40	
	30	9.565 8352	532	9.597 4317	615	0.402 5683	9.968 4036	84	30	
	40	9.565 8884	532	9.597 4932	615	0.402 5068	9.968 3952	83	20	
	50	9.565 9416	532	9.597 5547	615	0.402 4453	9.968 3869	83	10	
36	0	9.565 9948	532	9.597 6162	615	0.402 3838	9.968 3786	84	0	24
	10	9.566 0480	531	9.597 6777	615	0.402 3223	9.968 3702	83	50	
	20	9.566 1011	532	9.597 7392	615	0.402 2608	9.968 3619	84	40	
	30	9.566 1543	531	9.597 8007	615	0.402 1993	9.968 3535	83	30	
	40	9.566 2074	532	9.597 8622	615	0.402 1378	9.968 3452	83	20	
	50	9.566 2606	531	9.597 9237	615	0.402 0763	9.968 3369	84	10	
37	0	9.566 3137	532	9.597 9852	615	0.402 0148	9.968 3285	83	0	23
	10	9.566 3669	531	9.598 0467	614	0.401 9533	9.968 3202	84	50	
	20	9.566 4200	531	9.598 1081	615	0.401 8919	9.968 3118	83	40	
	30	9.566 4731	531	9.598 1696	615	0.401 8304	9.968 3035	84	30	
	40	9.566 5262	531	9.598 2311	614	0.401 7689	9.968 2951	83	20	
	50	9.566 5793	531	9.598 2925	615	0.401 7075	9.968 2868	84	10	
38	0	9.566 6324	531	9.598 3540	614	0.401 6460	9.968 2784	83	0	22
	10	9.566 6855	531	9.598 4154	614	0.401 5846	9.968 2701	84	50	
	20	9.566 7386	530	9.598 4768	614	0.401 5232	9.968 2617	83	40	
	30	9.566 7916	531	9.598 5382	615	0.401 4618	9.968 2534	84	30	
	40	9.566 8447	530	9.598 5997	614	0.401 4003	9.968 2450	83	20	
	50	9.566 8977	531	9.598 6611	614	0.401 3389	9.968 2367	84	10	
39	0	9.566 9508	530	9.598 7225	614	0.401 2775	9.968 2283	83	0	21
	10	9.567 0038	531	9.598 7839	614	0.401 2161	9.968 2200	84	50	
	20	9.567 0569	530	9.598 8453	614	0.401 1547	9.968 2116	84	40	
	30	9.567 1099	530	9.598 9067	613	0.401 0933	9.968 2032	83	30	
	40	9.567 1629	530	9.598 9680	614	0.401 0320	9.968 1949	84	20	
	50	9.567 2159	530	9.599 0294	614	0.400 9706	9.968 1865	84	10	
40	0	9.567 2689		9.599 0908		0.400 9092	9.968 1781		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	617
1	61.7
2	123.4
3	185.1
4	246.8
5	308.5
6	370.2
7	431.9
8	493.6
9	555.3

	615
1	61.5
2	123.0
3	184.5
4	246.0
5	307.5
6	369.0
7	430.5
8	492.0
9	553.5

	613
1	61.3
2	122.6
3	183.9
4	245.2
5	306.5
6	367.8
7	429.1
8	490.4
9	551.7

	533
1	53.3
2	106.6
3	159.9
4	213.2
5	266.5
6	319.8
7	373.1
8	426.4
9	479.7

	531
1	53.1
2	106.2
3	159.3
4	212.4
5	265.5
6	318.6
7	371.7
8	424.8
9	477.9

	83
1	8.3
2	16.6
3	24.9
4	33.2
5	41.5
6	49.8
7	58.1
8	66.4
9	74.7

21°

613	
1	61.3
2	122.6
3	183.9
4	245.2
5	306.5
6	367.8
7	429.1
8	490.4
9	551.7

612	
1	61.2
2	122.4
3	183.6
4	244.8
5	306.0
6	367.2
7	428.4
8	489.6
9	550.8

611	
1	61.1
2	122.2
3	183.3
4	244.4
5	305.5
6	366.6
7	427.7
8	488.8
9	549.9

530	
1	53.0
2	106.0
3	159.0
4	212.0
5	265.0
6	318.0
7	371.0
8	424.0
9	477.0

528	
1	52.8
2	105.6
3	158.4
4	211.2
5	264.0
6	316.8
7	369.6
8	422.4
9	475.2

84	
1	8.4
2	16.8
3	25.2
4	33.6
5	42.0
6	50.4
7	58.8
8	67.2
9	75.6

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.567 2689	530	9.599 0908	613	0.400 9092	9.968 1781	83	0	20
	10	9.567 3219	530	9.599 1521	614	0.400 8479	9.968 1698	84	50	
	20	9.567 3749	530	9.599 2135	613	0.400 7865	9.968 1614	84	40	
	30	9.567 4279	530	9.599 2748	614	0.400 7252	9.968 1530	83	30	
	40	9.567 4809	529	9.599 3362	613	0.400 6638	9.968 1447	84	20	
	50	9.567 5338	530	9.599 3975	613	0.400 6025	9.968 1363	84	10	
41	0	9.567 5868	529	9.599 4588	614	0.400 5412	9.968 1279	83	0	19
	10	9.567 6397	530	9.599 5202	613	0.400 4798	9.968 1196	84	50	
	20	9.567 6927	529	9.599 5815	613	0.400 4185	9.968 1112	84	40	
	30	9.567 7456	529	9.599 6428	613	0.400 3572	9.968 1028	84	30	
	40	9.567 7985	530	9.599 7041	613	0.400 2959	9.968 0944	83	20	
	50	9.567 8515	529	9.599 7654	613	0.400 2346	9.968 0861	84	10	
42	0	9.567 9044	529	9.599 8267	613	0.400 1733	9.968 0777	84	0	18
	10	9.567 9573	529	9.599 8880	613	0.400 1120	9.968 0693	84	50	
	20	9.568 0102	529	9.599 9493	612	0.400 0507	9.968 0609	84	40	
	30	9.568 0631	529	9.600 0105	613	0.399 9895	9.968 0525	83	30	
	40	9.568 1160	528	9.600 0718	613	0.399 9282	9.968 0442	84	20	
	50	9.568 1688	529	9.600 1331	612	0.399 8669	9.968 0358	84	10	
43	0	9.568 2217	529	9.600 1943	613	0.399 8057	9.968 0274	84	0	17
	10	9.568 2746	528	9.600 2556	612	0.399 7444	9.968 0190	84	50	
	20	9.568 3274	529	9.600 3168	612	0.399 6832	9.968 0106	84	40	
	30	9.568 3803	528	9.600 3780	613	0.399 6220	9.968 0022	84	30	
	40	9.568 4331	528	9.600 4393	612	0.399 5607	9.967 9938	84	20	
	50	9.568 4859	528	9.600 5005	612	0.399 4995	9.967 9854	83	10	
44	0	9.568 5387	529	9.600 5617	612	0.399 4383	9.967 9771	84	0	16
	10	9.568 5916	528	9.600 6229	612	0.399 3771	9.967 9687	84	50	
	20	9.568 6444	528	9.600 6841	612	0.399 3159	9.967 9603	84	40	
	30	9.568 6972	528	9.600 7453	612	0.399 2547	9.967 9519	84	30	
	40	9.568 7500	528	9.600 8065	612	0.399 1935	9.967 9435	84	20	
	50	9.568 8028	527	9.600 8677	612	0.399 1323	9.967 9351	84	10	
45	0	9.568 8555	528	9.600 9289	611	0.399 0711	9.967 9267	84	0	15
	10	9.568 9083	528	9.600 9900	612	0.399 0100	9.967 9183	84	50	
	20	9.568 9611	527	9.601 0512	612	0.398 9488	9.967 9099	84	40	
	30	9.569 0138	528	9.601 1124	611	0.398 8876	9.967 9015	84	30	
	40	9.569 0666	527	9.601 1735	612	0.398 8265	9.967 8931	84	20	
	50	9.569 1193	528	9.601 2347	611	0.398 7653	9.967 8847	84	10	
46	0	9.569 1721	527	9.601 2958	611	0.398 7042	9.967 8763	85	0	14
	10	9.569 2248	527	9.601 3569	612	0.398 6431	9.967 8678	84	50	
	20	9.569 2775	527	9.601 4181	611	0.398 5819	9.967 8594	84	40	
	30	9.569 3302	527	9.601 4792	611	0.398 5208	9.967 8510	84	30	
	40	9.569 3829	527	9.601 5403	611	0.398 4597	9.967 8426	84	20	
	50	9.569 4356	527	9.601 6014	611	0.398 3986	9.967 8342	84	10	
47	0	9.569 4883	527	9.601 6625	611	0.398 3375	9.967 8258	84	0	13
	10	9.569 5410	527	9.601 7236	611	0.398 2764	9.967 8174	84	50	
	20	9.569 5937	526	9.601 7847	611	0.398 2153	9.967 8090	85	40	
	30	9.569 6463	527	9.601 8458	611	0.398 1542	9.967 8005	84	30	
	40	9.569 6990	526	9.601 9069	610	0.398 0931	9.967 7921	84	20	
	50	9.569 7516	527	9.601 9679	611	0.398 0321	9.967 7837	84	10	
48	0	9.569 8043	526	9.602 0290	611	0.397 9710	9.967 7753	84	0	12
	10	9.569 8569	527	9.602 0901	610	0.397 9099	9.967 7669	85	50	
	20	9.569 9096	526	9.602 1511	611	0.397 8489	9.967 7584	84	40	
	30	9.569 9622	526	9.602 2122	610	0.397 7878	9.967 7500	84	30	
	40	9.570 0148	526	9.602 2732	610	0.397 7268	9.967 7416	84	20	
	50	9.570 0674	526	9.602 3342	611	0.397 6658	9.967 7332	85	10	
49	0	9.570 1200	526	9.602 3953	610	0.397 6047	9.967 7247	84	0	11
	10	9.570 1726	526	9.602 4563	610	0.397 5437	9.967 7163	84	50	
	20	9.570 2252	526	9.602 5173	610	0.397 4827	9.967 7079	85	40	
	30	9.570 2778	525	9.602 5783	610	0.397 4217	9.967 6994	84	30	
	40	9.570 3303	526	9.602 6393	610	0.397 3607	9.967 6910	84	20	
	50	9.570 3829	526	9.602 7003	610	0.397 2997	9.967 6826	85	10	
50	0	9.570 4355		9.602 7613		0.397 2387	9.967 6741		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

68°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.570 4355	525	9.602 7613	610	0.397 2387	9.967 6741	84	0	10
	10	9.570 4880	525	9.602 8223	610	0.397 1777	9.967 6657	84	50	
	20	9.570 5405	526	9.602 8833	610	0.397 1167	9.967 6573	85	40	
	30	9.570 5931	525	9.602 9443	609	0.397 0557	9.967 6488	84	30	
	40	9.570 6456	525	9.603 0052	610	0.396 9948	9.967 6404	85	20	
	50	9.570 6981	525	9.603 0662	609	0.396 9338	9.967 6319	84	10	
51	0	9.570 7506	525	9.603 1271	610	0.396 8729	9.967 6235	84	0	9
	10	9.570 8031	525	9.603 1881	609	0.396 8119	9.967 6151	85	50	
	20	9.570 8556	525	9.603 2490	610	0.396 7510	9.967 6066	84	40	
	30	9.570 9081	525	9.603 3100	609	0.396 6900	9.967 5982	85	30	
	40	9.570 9606	525	9.603 3709	609	0.396 6291	9.967 5897	84	20	
	50	9.571 0131	525	9.603 4318	609	0.396 5682	9.967 5813	85	10	
52	0	9.571 0656	524	9.603 4927	609	0.396 5073	9.967 5728	84	0	8
	10	9.571 1180	525	9.603 5536	610	0.396 4464	9.967 5644	85	50	
	20	9.571 1705	524	9.603 6146	609	0.396 3854	9.967 5559	84	40	
	30	9.571 2229	525	9.603 6755	608	0.396 3245	9.967 5475	85	30	
	40	9.571 2754	524	9.603 7363	609	0.396 2637	9.967 5390	84	20	
	50	9.571 3278	524	9.603 7972	609	0.396 2028	9.967 5306	85	10	
53	0	9.571 3802	524	9.603 8581	609	0.396 1419	9.967 5221	85	0	7
	10	9.57[illegible]6	524	9.603 9190	609	0.396 0810	9.967 5136	84	50	
	20	9.571 4850	524	9.603 9799	608	0.396 0201	9.967 5052	85	40	
	30	9.571 5374	524	9.604 0407	609	0.395 9593	9.967 4967	84	30	
	40	9.571 5898	524	9.604 1016	608	0.395 8984	9.967 4883	85	20	
	50	9.571 6422	524	9.604 1624	609	0.395 8376	9.967 4798	85	10	
54	0	9.571 6946	524	9.604 2233	608	0.395 7767	9.967 4713	84	0	6
	10	9.571 7470	523	9.604 2841	608	0.395 7159	9.967 4629	85	50	
	20	9.571 7993	524	9.604 3449	609	0.395 6551	9.967 4544	85	40	
	30	9.571 8517	524	9.604 4058	608	0.395 5942	9.967 4459	84	30	
	40	9.571 9041	523	9.604 4666	608	0.395 5334	9.967 4375	85	20	
	50	9.571 9564	523	9.604 5274	608	0.395 4726	9.967 4290	85	10	
55	0	9.572 0087	524	9.604 5882	608	0.395 4118	9.967 4205	84	0	5
	10	9.572 0611	523	9.604 6490	608	0.395 3510	9.967 4121	85	50	
	20	9.572 1134	523	9.604 7098	608	0.395 2902	9.967 4036	85	40	
	30	9.572 1657	523	9.604 7706	608	0.395 2294	9.967 3951	85	30	
	40	9.572 2180	523	9.604 8314	607	0.395 1686	9.967 3866	84	20	
	50	9.572 2703	523	9.604 8921	608	0.395 1079	9.967 3782	85	10	
56	0	9.572 3226	523	9.604 9529	608	0.395 0471	9.967 3697	85	0	4
	10	9.572 3749	523	9.605 0137	607	0.394 9863	9.967 3612	85	50	
	20	9.572 4272	522	9.605 0744	608	0.394 9256	9.967 3527	85	40	
	30	9.572 4794	523	9.605 1352	607	0.394 8648	9.967 3442	84	30	
	40	9.572 5317	522	9.605 1959	608	0.394 8041	9.967 3358	85	20	
	50	9.572 5839	523	9.605 2567	607	0.394 7433	9.967 3273	85	10	
57	0	9.572 6362	522	9.605 3174	607	0.394 6826	9.967 3188	85	0	3
	10	9.572 6884	523	9.605 3781	608	0.394 6219	9.967 3103	85	50	
	20	9.572 7407	522	9.605 4389	607	0.394 5611	9.967 3018	85	40	
	30	9.572 7929	522	9.605 4996	607	0.394 5004	9.967 2933	85	30	
	40	9.572 8451	522	9.605 5603	607	0.394 4397	9.967 2848	85	20	
	50	9.572 8973	522	9.605 6210	607	0.394 3790	9.967 2763	84	10	
58	0	9.572 9495	522	9.605 6817	607	0.394 3183	9.967 2679	85	0	2
	10	9.573 0017	522	9.605 7424	606	0.394 2576	9.967 2594	85	50	
	20	9.573 0539	522	9.605 8030	607	0.394 1970	9.967 2509	85	40	
	30	9.573 1061	522	9.605 8637	607	0.394 1363	9.967 2424	85	30	
	40	9.573 1583	521	9.605 9244	607	0.394 0756	9.967 2339	85	20	
	50	9.573 2104	522	9.605 9851	606	0.394 0149	9.967 2254	85	10	
59	0	9.573 2626	522	9.606 0457	607	0.393 9543	9.967 2169	85	0	1
	10	9.573 3148	521	9.606 1064	606	0.393 8936	9.967 2084	85	50	
	20	9.573 3669	521	9.606 1670	607	0.393 8330	9.967 1999	85	40	
	30	9.573 4190	522	9.606 2277	606	0.393 7723	9.967 1914	85	30	
	40	9.573 4712	521	9.606 2883	606	0.393 7117	9.967 1829	85	20	
	50	9.573 5233	521	9.606 3489	607	0.393 6511	9.967 1744	85	10	
60	0	9.573 5754		9.606 4096		0.393 5904	9.967 1659		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	**Sin**	d.	″	′

	609
1	60.9
2	121.8
3	182.7
4	243.6
5	304.5
6	365.4
7	426.3
8	487.2
9	548.1

	607
1	60.7
2	121.4
3	182.1
4	242.8
5	303.5
6	364.2
7	424.9
8	485.6
9	546.3

	526
1	52.6
2	105.2
3	157.8
4	210.4
5	263.0
6	315.6
7	368.2
8	420.8
9	473.4

	524
1	52.4
2	104.8
3	157.2
4	209.6
5	262.0
6	314.4
7	366.8
8	419.2
9	471.6

	522
1	52.2
2	104.4
3	156.6
4	208.8
5	261.0
6	313.2
7	365.4
8	417.6
9	469.8

	85
1	8.5
2	17.0
3	25.5
4	34.0
5	42.5
6	51.0
7	59.5
8	68.0
9	76.5

22°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.573 5754	521	9.606 4096	606	0.393 5904	9.967 1659	85	0	60
	10	9.573 6275	521	9.606 4702	606	0.393 5298	9.967 1574	86	50	
	20	9.573 6796	521	9.606 5308	606	0.393 4692	9.967 1488	85	40	
	30	9.573 7317	521	9.606 5914	606	0.393 4086	9.967 1403	85	30	
	40	9.573 7838	521	9.606 6520	606	0.393 3480	9.967 1318	85	20	
	50	9.573 8359	521	9.606 7126	606	0.393 2874	9.967 1233	85	10	
1	0	9.573 8880	520	9.606 7732	605	0.393 2268	9.967 1148	85	0	59
	10	9.573 9400	521	9.606 8337	606	0.393 1663	9.967 1063	85	50	
	20	9.573 9921	520	9.606 8943	606	0.393 1057	9.967 0978	85	40	
	30	9.574 0441	521	9.606 9549	606	0.393 0451	9.967 0893	86	30	
	40	9.574 0962	520	9.607 0155	605	0.392 9845	9.967 0807	85	20	
	50	9.574 1482	521	9.607 0760	606	0.392 9240	9.967 0722	85	10	
2	0	9.574 2003	520	9.607 1366	605	0.392 8634	9.967 0637	85	0	58
	10	9.574 2523	520	9.607 1971	605	0.392 8029	9.967 0552	86	50	
	20	9.574 3043	520	9.607 2576	606	0.392 7424	9.967 0466	85	40	
	30	9.574 3563	520	9.607 3182	605	0.392 6818	9.967 0381	85	30	
	40	9.574 4083	520	9.607 3787	605	0.392 6213	9.967 0296	85	20	
	50	9.574 4603	520	9.607 4392	605	0.392 5608	9.967 0211	86	10	
3	0	9.574 5123	520	9.607 4997	605	0.392 5003	9.967 0125	85	0	57
	10	9.574 5643	519	9.607 5602	605	0.392 4398	9.967 0040	85	50	
	20	9.574 6162	520	9.607 6207	605	0.392 3793	9.966 9955	85	40	
	30	9.574 6682	520	9.607 6812	605	0.392 3188	9.966 9870	86	30	
	40	9.574 7202	519	9.607 7417	605	0.392 2583	9.966 9784	85	20	
	50	9.574 7721	519	9.607 8022	605	0.392 1978	9.966 9699	85	10	
4	0	9.574 8240	520	9.607 8627	605	0.392 1373	9.966 9614	86	0	56
	10	9.574 8760	519	9.607 9232	604	0.392 0768	9.966 9528	85	50	
	20	9.574 9279	519	9.607 9836	605	0.392 0164	9.966 9443	86	40	
	30	9.574 9798	519	9.608 0441	604	0.391 9559	9.966 9357	85	30	
	40	9.575 0317	520	9.608 1045	605	0.391 8955	9.966 9272	85	20	
	50	9.575 0837	519	9.608 1650	604	0.391 8350	9.966 9187	86	10	
5	0	9.575 1356	518	9.608 2254	605	0.391 7746	9.966 9101	85	0	55
	10	9.575 1874	519	9.608 2859	604	0.391 7141	9.966 9016	86	50	
	20	9.575 2393	519	9.608 3463	604	0.391 6537	9.966 8930	85	40	
	30	9.575 2912	519	9.608 4067	604	0.391 5933	9.966 8845	86	30	
	40	9.575 3431	518	9.608 4671	605	0.391 5329	9.966 8759	85	20	
	50	9.575 3949	519	9.608 5276	604	0.391 4724	9.966 8674	86	10	
6	0	9.575 4468	518	9.608 5880	604	0.391 4120	9.966 8588	85	0	54
	10	9.575 4986	519	9.608 6484	603	0.391 3516	9.966 8503	86	50	
	20	9.575 5505	518	9.608 7087	604	0.391 2913	9.966 8417	85	40	
	30	9.575 6023	519	9.608 7691	604	0.391 2309	9.966 8332	86	30	
	40	9.575 6542	518	9.608 8295	604	0.391 1705	9.966 8246	85	20	
	50	9.575 7060	518	9.608 8899	604	0.391 1101	9.966 8161	86	10	
7	0	9.575 7578	518	9.608 9503	603	0.391 0497	9.966 8075	85	0	53
	10	9.575 8096	518	9.609 0106	604	0.390 9894	9.966 7990	86	50	
	20	9.575 8614	518	9.609 0710	603	0.390 9290	9.966 7904	86	40	
	30	9.575 9132	518	9.609 1313	604	0.390 8687	9.966 7818	85	30	
	40	9.575 9650	517	9.609 1917	603	0.390 8083	9.966 7733	86	20	
	50	9.576 0167	518	9.609 2520	604	0.390 7480	9.966 7647	85	10	
8	0	9.576 0685	518	9.609 3124	603	0.390 6876	9.966 7562	86	0	52
	10	9.576 1203	517	9.609 3727	603	0.390 6273	9.966 7476	86	50	
	20	9.576 1720	518	9.609 4330	603	0.390 5670	9.966 7390	85	40	
	30	9.576 2238	517	9.609 4933	603	0.390 5067	9.966 7305	86	30	
	40	9.576 2755	518	9.609 5536	603	0.390 4464	9.966 7219	86	20	
	50	9.576 3273	517	9.609 6139	603	0.390 3861	9.966 7133	85	10	
9	0	9.576 3790	517	9.609 6742	603	0.390 3258	9.966 7048	86	0	51
	10	9.576 4307	517	9.609 7345	603	0.390 2655	9.966 6962	86	50	
	20	9.576 4824	517	9.609 7948	603	0.390 2052	9.966 6876	86	40	
	30	9.576 5341	517	9.609 8551	603	0.390 1449	9.966 6790	85	30	
	40	9.576 5858	517	9.609 9154	602	0.390 0846	9.966 6705	86	20	
	50	9.576 6375	517	9.609 9756	603	0.390 0244	9.966 6619	86	10	
10	0	9.576 6892		9.610 0359		0.389 9641	9.966 6533		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

67°

	605
1	60.5
2	121.0
3	181.5
4	242.0
5	302.5
6	363.0
7	423.5
8	484.0
9	544.5

	604
1	60.4
2	120.8
3	181.2
4	241.6
5	302.0
6	362.4
7	422.8
8	483.2
9	543.6

	603
1	60.3
2	120.6
3	180.9
4	241.2
5	301.5
6	361.8
7	422.1
8	482.4
9	542.7

	521
1	52.1
2	104.2
3	156.3
4	208.4
5	260.5
6	312.6
7	364.7
8	416.8
9	468.9

	519
1	51.9
2	103.8
3	155.7
4	207.6
5	259.5
6	311.4
7	363.3
8	415.2
9	467.1

	85
1	8.5
2	17.0
3	25.5
4	34.0
5	42.5
6	51.0
7	59.5
8	68.0
9	76.5

22°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d	″	′
10	0	9.576 6892	517	9.610 0359	602	0.389 9641	9.966 6533	86	0	50
	10	9.576 7409	516	9.610 0961	603	0.389 9039	9.966 6447	85	50	
	20	9.576 7925	517	9.610 1564	602	0.389 8436	9.966 6362	86	40	
	30	9.576 8442	517	9.610 2166	603	0.389 7834	9.966 6276	86	30	
	40	9.576 8959	516	9.610 2769	602	0.389 7231	9.966 6190	86	20	
	50	9.576 9475	516	9.610 3371	602	0.389 6629	9.966 6104	86	10	
11	0	9.576 9991	517	9.610 3973	602	0.389 6027	9.966 6018	86	0	49
	10	9.577 0508	516	9.610 4575	603	0.389 5425	9.966 5932	86	50	
	20	9.577 1024	516	9.610 5178	602	0.389 4822	9.966 5846	85	40	
	30	9.577 1540	516	9.610 5780	602	0.389 4220	9.966 5761	86	30	
	40	9.577 2056	516	9.610 6382	602	0.389 3618	9.966 5675	86	20	
	50	9.577 2572	516	9.610 6984	602	0.389 3016	9.966 5589	86	10	
12	0	9.577 3088	516	9.610 7586	601	0.389 2414	9.966 5503	86	0	48
	10	9.577 3604	516	9.610 8187	602	0.389 1813	9.966 5417	86	50	
	20	9.577 4120	516	9.610 8789	602	0.389 1211	9.966 5331	86	40	
	30	9.577 4636	516	9.610 9391	601	0.389 0609	9.966 5245	86	30	
	40	9.577 5152	515	9.610 9992	602	0.389 0008	9.966 5159	86	20	
	50	9.577 5667	516	9.611 0594	602	0.388 9406	9.966 5073	86	10	
13	0	9.577 6183	515	9.611 1196	601	0.388 8804	9.966 4987	86	0	47
	10	9.577 6698	516	9.611 1797	602	0.388 8203	9.966 4901	86	50	
	20	9.577 7214	515	9.611 2399	601	0.388 7601	9.966 4815	86	40	
	30	9.577 7729	515	9.611 3000	601	0.388 7000	9.966 4729	86	30	
	40	9.577 8244	515	9.611 3601	601	0.388 6399	9.966 4643	86	20	
	50	9.577 8759	516	9.611 4202	602	0.388 5798	9.966 4557	86	10	
14	0	9.577 9275	515	9.611 4804	601	0.388 5196	9.966 4471	86	0	46
	10	9.577 9790	515	9.611 5405	601	0.388 4595	9.966 4385	86	50	
	20	9.578 0305	514	9.611 6006	601	0.388 3994	9.966 4299	86	40	
	30	9.578 0819	515	9.611 6607	601	0.388 3393	9.966 4213	86	30	
	40	9.578 1334	515	9.611 7208	601	0.388 2792	9.966 4127	87	20	
	50	9.578 1849	515	9.611 7809	600	0.388 2191	9.966 4040	86	10	
15	0	9.578 2364	514	9.611 8409	601	0.388 1591	9.966 3954	86	0	45
	10	9.578 2878	515	9.611 9010	601	0.388 0990	9.966 3868	86	50	
	20	9.578 3393	514	9.611 9611	601	0.388 0389	9.966 3782	86	40	
	30	9.578 3907	515	9.612 0212	600	0.387 9788	9.966 3696	86	30	
	40	9.578 4422	514	9.612 0812	601	0.387 9188	9.966 3610	87	20	
	50	9.578 4936	514	9.612 1413	600	0.387 8587	9.966 3523	86	10	
16	0	9.578 5450	515	9.612 2013	601	0.387 7987	9.966 3437	86	0	44
	10	9.578 5965	514	9.612 2614	600	0.387 7386	9.966 3351	86	50	
	20	9.578 6479	514	9.612 3214	600	0.387 6786	9.966 3265	86	40	
	30	9.578 6993	514	9.612 3814	600	0.387 6186	9.966 3179	87	30	
	40	9.578 7507	514	9.612 4414	601	0.387 5586	9.966 3092	86	20	
	50	9.578 8021	514	9.612 5015	600	0.387 4985	9.966 3006	86	10	
17	0	9.578 8535	513	9.612 5615	600	0.387 4385	9.966 2920	87	0	43
	10	9.578 9048	514	9.612 6215	600	0.387 3785	9.966 2833	86	50	
	20	9.578 9562	514	9.612 6815	600	0.387 3185	9.966 2747	86	40	
	30	9.579 0076	513	9.612 7415	600	0.387 2585	9.966 2661	86	30	
	40	9.579 0589	514	9.612 8015	599	0.387 1985	9.966 2575	87	20	
	50	9.579 1103	513	9.612 8614	600	0.387 1386	9.966 2488	86	10	
18	0	9.579 1616	513	9.612 9214	600	0.387 0786	9.966 2402	87	0	42
	10	9.579 2129	514	9.612 9814	600	0.387 0186	9.966 2315	86	50	
	20	9.579 2643	513	9.613 0414	599	0.386 9586	9.966 2229	86	40	
	30	9.579 3156	513	9.613 1013	600	0.386 8987	9.966 2143	87	30	
	40	9.579 3669	513	9.613 1613	599	0.386 8387	9.966 2056	86	20	
	50	9.579 4182	513	9.613 2212	600	0.386 7788	9.966 1970	86	10	
19	0	9.579 4695	513	9.613 2812	599	0.386 7188	9.966 1884	87	0	41
	10	9.579 5208	513	9.613 3411	599	0.386 6589	9.966 1797	86	50	
	20	9.579 5721	513	9.613 4010	599	0.386 5990	9.966 1711	87	40	
	30	9.579 6234	512	9.613 4609	600	0.386 5391	9.966 1624	86	30	
	40	9.579 6746	513	9.613 5209	599	0.386 4791	9.966 1538	87	20	
	50	9.579 7259	513	9.613 5808	599	0.386 4192	9.966 1451	86	10	
20	0	9.579 7772		9.613 6407		0.386 3593	9.966 1365		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

67°

	601
1	60.1
2	120.2
3	180.3
4	240.4
5	300.5
6	360.6
7	420.7
8	480.8
9	540.9

	599
1	59.9
2	119.8
3	179.7
4	239.6
5	299.5
6	359.4
7	419.3
8	479.2
9	539.1

	517
1	51.7
2	103.4
3	155.1
4	206.8
5	258.5
6	310.2
7	361.9
8	413.6
9	465.3

	515
1	51.5
2	103.0
3	154.5
4	206.0
5	257.5
6	309.0
7	360.5
8	412.0
9	463.5

	513
1	51.3
2	102.6
3	153.9
4	205.2
5	256.5
6	307.8
7	359.1
8	410.4
9	461.7

	86
1	8.6
2	17.2
3	25.8
4	34.4
5	43.0
6	51.6
7	60.2
8	68.8
9	77.4

22°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.579 7772	512	9.613 6407	599	0.386 3593	9.966 1365	87	0	40
	10	9.579 8284	512	9.613 7006	599	0.386 2994	9.966 1278	86	50	
	20	9.579 8796	513	9.613 7605	599	0.386 2395	9.966 1192	87	40	
	30	9.579 9309	512	9.613 8204	598	0.386 1796	9.966 1105	86	30	
	40	9.579 9821	512	9.613 8802	599	0.386 1198	9.966 1019	87	20	
	50	9.580 0333	512	9.613 9401	599	0.386 0599	9.966 0932	86	10	
21	0	9.580 0845	512	9.614 0000	598	0.386 0000	9.966 0846	87	0	39
	10	9.580 1357	512	9.614 0598	599	0.385 9402	9.966 0759	87	50	
	20	9.580 1869	512	9.614 1197	599	0.385 8803	9.966 0672	86	40	
	30	9.580 2381	512	9.614 1796	598	0.385 8204	9.966 0586	87	30	
	40	9.580 2893	512	9.614 2394	598	0.385 7606	9.966 0499	86	20	
	50	9.580 3405	512	9.614 2992	599	0.385 7008	9.966 0413	87	10	
22	0	9.580 3917	511	9.614 3591	598	0.385 6409	9.966 0326	87	0	38
	10	9.580 4428	512	9.614 4189	598	0.385 5811	9.966 0239	86	50	
	20	9.580 4940	512	9.614 4787	599	0.385 5213	9.966 0153	87	40	
	30	9.580 5452	511	9.614 5386	598	0.385 4614	9.966 0066	87	30	
	40	9.580 5963	511	9.614 5984	598	0.385 4016	9.965 9979	86	20	
	50	9.580 6474	512	9.614 6582	598	0.385 3418	9.965 9893	87	10	
23	0	9.580 6986	511	9.614 7180	598	0.385 2820	9.965 9806	87	0	37
	10	9.580 7497	511	9.614 7778	598	0.385 2222	9.965 9719	87	50	
	20	9.580 8008	511	9.614 8376	597	0.385 1624	9.965 9632	86	40	
	30	9.580 8519	511	9.614 8973	598	0.385 1027	9.965 9546	87	30	
	40	9.580 9030	511	9.614 9571	598	0.385 0429	9.965 9459	87	20	
	50	9.580 9541	511	9.615 0169	597	0.384 9831	9.965 9372	87	10	
24	0	9.581 0052	511	9.615 0766	598	0.384 9234	9.965 9285	86	0	36
	10	9.581 0563	510	9.615 1364	598	0.384 8636	9.965 9199	87	50	
	20	9.581 1073	511	9.615 1962	597	0.384 8038	9.965 9112	87	40	
	30	9.581 1584	511	9.615 2559	598	0.384 7441	9.965 9025	87	30	
	40	9.581 2095	510	9.615 3157	597	0.384 6843	9.965 8938	87	20	
	50	9.581 2605	511	9.615 3754	597	0.384 6246	9.965 8851	87	10	
25	0	9.581 3116	510	9.615 4351	597	0.384 5649	9.965 8764	86	0	35
	10	9.581 3626	510	9.615 4948	598	0.384 5052	9.965 8678	87	50	
	20	9.581 4136	511	9.615 5546	597	0.384 4454	9.965 8591	87	40	
	30	9.581 4647	510	9.615 6143	597	0.384 3857	9.965 8504	87	30	
	40	9.581 5157	510	9.615 6740	597	0.384 3260	9.965 8417	87	20	
	50	9.581 5667	510	9.615 7337	597	0.384 2663	9.965 8330	87	10	
26	0	9.581 6177	510	9.615 7934	597	0.384 2066	9.965 8243	87	0	34
	10	9.581 6687	510	9.615 8531	596	0.384 1469	9.965 8156	87	50	
	20	9.581 7197	510	9.615 9127	597	0.384 0873	9.965 8069	87	40	
	30	9.581 7707	509	9.615 9724	597	0.384 0276	9.965 7982	87	30	
	40	9.581 8216	510	9.616 0321	597	0.383 9679	9.965 7895	87	20	
	50	9.581 8726	510	9.616 0918	596	0.383 9082	9.965 7808	87	10	
27	0	9.581 9236	509	9.616 1514	597	0.383 8486	9.965 7721	87	0	33
	10	9.581 9745	510	9.616 2111	596	0.383 7889	9.965 7634	87	50	
	20	9.582 0255	509	9.616 2707	597	0.383 7293	9.965 7547	87	40	
	30	9.582 0764	509	9.616 3304	596	0.383 6696	9.965 7460	87	30	
	40	9.582 1273	510	9.616 3900	596	0.383 6100	9.965 7373	87	20	
	50	9.582 1783	509	9.616 4496	597	0.383 5504	9.965 7286	87	10	
28	0	9.582 2292	509	9.616 5093	596	0.383 4907	9.965 7199	87	0	32
	10	9.582 2801	509	9.616 5689	596	0.383 4311	9.965 7112	87	50	
	20	9.582 3310	509	9.616 6285	596	0.383 3715	9.965 7025	87	40	
	30	9.582 3819	509	9.616 6881	596	0.383 3119	9.965 6938	87	30	
	40	9.582 4328	509	9.616 7477	596	0.383 2523	9.965 6851	87	20	
	50	9.582 4837	508	9.616 8073	596	0.383 1927	9.965 6764	87	10	
29	0	9.582 5345	509	9.616 8669	596	0.383 1331	9.965 6677	88	0	31
	10	9.582 5854	509	9.616 9265	596	0.383 0735	9.965 6589	87	50	
	20	9.582 6363	508	9.616 9861	595	0.383 0139	9.965 6502	87	40	
	30	9.582 6871	509	9.617 0456	596	0.382 9544	9.965 6415	87	30	
	40	9.582 7380	508	9.617 1052	596	0.382 8948	9.965 6328	87	20	
	50	9.582 7888	509	9.617 1648	595	0.382 8352	9.965 6241	88	10	
30	0	9.582 8397		9.617 2243		0.382 7757	9.965 6153		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	599
1	59.9
2	119.8
3	179.7
4	239.6
5	299.5
6	359.4
7	419.3
8	479.2
9	539.1

	597
1	59.7
2	119.4
3	179.1
4	238.8
	298.5
6	358.2
7	417.9
8	477.6
9	537.3

	513
1	51.3
2	102.6
3	153.9
4	205.2
5	256.5
6	307.8
7	359.1
8	410.4
9	461.7

	511
1	51.1
2	102.2
3	153.3
4	204.4
5	255.5
6	306.6
7	357.7
8	408.8
9	459.9

	509
1	50.9
2	101.8
3	152.7
4	203.6
5	254.5
6	305.4
7	356.3
8	407.2
9	458.1

	87
1	8.7
2	17.4
3	26.1
4	34.8
5	43.5
6	52.2
7	60.9
8	69.6
9	78.3

67°

22°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.582 8397	508	9.617 2243	596	0.382 7757	9.965 6153	87	0	30
	10	9.582 8905	508	9.617 2839	595	0.382 7161	9.965 6066	87	50	
	20	9.582 9413	508	9.617 3434	595	0.382 6566	9.965 5979	87	40	
	30	9.582 9921	508	9.617 4029	596	0.382 5971	9.965 5892	87	30	
	40	9.583 0429	508	9.617 4625	595	0.382 5375	9.965 5805	88	20	
	50	9.583 0937	508	9.617 5220	595	0.382 4780	9.965 5717	87	10	
31	0	9.583 1445	508	9.617 5815	595	0.382 4185	9.965 5630	87	0	29
	10	9.583 1953	508	9.617 6410	596	0.382 3590	9.965 5543	88	50	
	20	9.583 2461	508	9.617 7006	595	0.382 2994	9.965 5455	87	40	
	30	9.583 2969	507	9.617 7601	595	0.382 2399	9.965 5368	87	30	
	40	9.583 3476	508	9.617 8196	594	0.382 1804	9.965 5281	88	20	
	50	9.583 3984	507	9.617 8790	595	0.382 1210	9.965 5193	87	10	
32	0	9.583 4491	508	9.617 9385	595	0.382 0615	9.965 5106	87	0	28
	10	9.583 4999	507	9.617 9980	595	0.382 0020	9.965 5019	88	50	
	20	9.583 5506	508	9.618 0575	595	0.381 9425	9.965 4931	87	40	
	30	9.583 6014	507	9.618 1170	594	0.381 8830	9.965 4844	87	30	
	40	9.583 6521	507	9.618 1764	595	0.381 8236	9.965 4757	88	20	
	50	9.583 7028	507	9.618 2359	594	0.381 7641	9.965 4669	87	10	
33	0	9.583 7535	507	9.618 2953	595	0.381 7047	9.965 4582	88	0	27
	10	9.583 8042	507	9.618 3548	594	0.381 6452	9.965 4494	87	50	
	20	9.583 8549	507	9.618 4142	595	0.381 5858	9.965 4407	88	40	
	30	9.583 9056	507	9.618 4737	594	0.381 5263	9.965 4319	87	30	
	40	9.583 9563	506	9.618 5331	594	0.381 4669	9.965 4232	88	20	
	50	9.584 0069	507	9.618 5925	594	0.381 4075	9.965 4144	87	10	
34	0	9.584 0576	507	9.618 6519	594	0.381 3481	9.965 4057	88	0	26
	10	9.584 1083	506	9.618 7113	594	0.381 2887	9.965 3969	87	50	
	20	9.584 1589	507	9.618 7707	594	0.381 2293	9.965 3882	88	40	
	30	9.584 2096	506	9.618 8301	594	0.381 1699	9.965 3794	87	30	
	40	9.584 2602	507	9.618 8895	594	0.381 1105	9.965 3707	88	20	
	50	9.584 3109	506	9.618 9489	594	0.381 0511	9.965 3619	87	10	
35	0	9.584 3615	506	9.619 0083	594	0.380 9917	9.965 3532	88	0	25
	10	9.584 4121	506	9.619 0677	594	0.380 9323	9.965 3444	87	50	
	20	9.584 4627	506	9.619 1271	593	0.380 8729	9.965 3357	88	40	
	30	9.584 5133	506	9.619 1864	594	0.380 8136	9.965 3269	88	30	
	40	9.584 5639	506	9.619 2458	593	0.380 7542	9.965 3181	87	20	
	50	9.584 6145	506	9.619 3051	594	0.380 6949	9.965 3094	88	10	
36	0	9.584 6651	506	9.619 3645	593	0.380 6355	9.965 3006	88	0	24
	10	9.584 7157	505	9.619 4238	594	0.380 5762	9.965 2918	87	50	
	20	9.584 7662	506	9.619 4832	593	0.380 5168	9.965 2831	88	40	
	30	9.584 8168	506	9.619 5425	593	0.380 4575	9.965 2743	88	30	
	40	9.584 8674	505	9.619 6018	594	0.380 3982	9.965 2655	87	20	
	50	9.584 9179	506	9.619 6612	593	0.380 3388	9.965 2568	88	10	
37	0	9.584 9685	505	9.619 7205	593	0.380 2795	9.965 2480	88	0	23
	10	9.585 0190	505	9.619 7798	593	0.380 2202	9.965 2392	88	50	
	20	9.585 0695	506	9.619 8391	593	0.380 1609	9.965 2304	87	40	
	30	9.585 1201	505	9.619 8984	593	0.380 1016	9.965 2217	88	30	
	40	9.585 1706	505	9.619 9577	593	0.380 0423	9.965 2129	88	20	
	50	9.585 2211	505	9.620 0170	592	0.379 9830	9.965 2041	88	10	
38	0	9.585 2716	505	9.620 0762	593	0.379 9238	9.965 1953	87	0	22
	10	9.585 3221	505	9.620 1355	593	0.379 8645	9.965 1866	88	50	
	20	9.585 3726	504	9.620 1948	592	0.379 8052	9.965 1778	88	40	
	30	9.585 4230	505	9.620 2540	593	0.379 7460	9.965 1690	88	30	
	40	9.585 4735	505	9.620 3133	593	0.379 6867	9.965 1602	88	20	
	50	9.585 5240	505	9.620 3726	592	0.379 6274	9.965 1514	88	10	
39	0	9.585 5745	504	9.620 4318	592	0.379 5682	9.965 1426	87	0	21
	10	9.585 6249	505	9.620 4910	593	0.379 5090	9.965 1339	88	50	
	20	9.585 6754	504	9.620 5503	592	0.379 4497	9.965 1251	88	40	
	30	9.585 7258	504	9.620 6095	592	0.379 3905	9.965 1163	88	30	
	40	9.585 7762	505	9.620 6687	593	0.379 3313	9.965 1075	88	20	
	50	9.585 8267	504	9.620 7280	592	0.379 2720	9.965 0987	88	10	
40	0	9.585 8771		9.620 7872		0.379 2128	9.965 0899		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	**Sin**	d.	″	′

67°

	595
1	59.5
2	119.0
3	178.5
4	238.0
5	297.5
6	357.0
7	416.5
8	476.0
9	535.5

	594
1	59.4
2	118.8
3	178.2
4	237.6
5	297.0
6	356.4
7	415.8
8	475.2
9	534.6

	593
1	59.3
2	118.6
3	177.9
4	237.2
5	296.5
6	355.8
7	415.1
8	474.4
9	533.7

	507
1	50.7
2	101.4
3	152.1
4	202.8
5	253.5
6	304.2
7	354.9
8	405.6
9	456.3

	505
1	50.5
2	101.0
3	151.5
4	202.0
5	252.5
6	303.0
7	353.5
8	404.0
9	454.5

	88
1	8.8
2	17.6
3	26.4
4	35.2
5	44.0
6	52.8
7	61.6
8	70.4
9	79.2

22°

591	
1	59.1
2	118.2
3	177.3
4	236.4
5	295.5
6	354.6
7	413.7
8	472.8
9	531.9

589	
1	58.9
2	117.8
3	176.7
4	235.6
5	294.5
6	353.4
7	412.3
8	471.2
9	530.1

504	
1	50.4
2	100.8
3	151.2
4	201.6
5	252.0
6	302.4
7	352.8
8	403.2
9	453.0

503	
1	50.3
2	100.6
3	150.9
4	201.2
5	251.5
6	301.8
7	352.1
8	402.4
9	452.7

501	
1	50.1
2	100.2
3	150.3
4	200.4
5	250.5
6	300.6
7	350.7
8	400.8
9	450.9

88	
1	8.8
2	17.6
3	26.4
4	35.2
5	44.0
6	52.8
7	61.6
8	70.4
9	79.2

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.585 8771	504	9.620 7872	592	0.379 2128	9.965 0899	88	0	20
	10	9.585 9275	504	9.620 8464	592	0.379 1536	9.965 0811	88	50	
	20	9.585 9779	504	9.620 9056	592	0.379 0944	9.965 0723	88	40	
	30	9.586 0283	504	9.620 9648	592	0.379 0352	9.965 0635	88	30	
	40	9.586 0787	504	9.621 0240	591	0.378 9760	9.965 0547	88	20	
	50	9.586 1291	504	9.621 0831	592	0.378 9169	9.965 0459	88	10	
41	0	9.586 1795	503	9.621 1423	592	0.378 8577	9.965 0371	88	0	19
	10	9.586 2298	504	9.621 2015	592	0.378 7985	9.965 0283	88	50	
	20	9.586 2802	503	9.621 2607	591	0.378 7393	9.965 0195	88	40	
	30	9.586 3305	504	9.621 3198	592	0.378 6802	9.965 0107	88	30	
	40	9.586 3809	503	9.621 3790	591	0.378 6210	9.965 0019	88	20	
	50	9.586 4312	504	9.621 4381	592	0.378 5619	9.964 9931	88	10	
42	0	9.586 4816	503	9.621 4973	591	0.378 5027	9.964 9843	88	0	18
	10	9.586 5319	503	9.621 5564	591	0.378 4436	9.964 9755	88	50	
	20	9.586 5822	503	9.621 6155	592	0.378 3845	9.964 9667	88	40	
	30	9.586 6325	504	9.621 6747	591	0.378 3253	9.964 9579	88	30	
	40	9.586 6829	503	9.621 7338	591	0.378 2662	9.964 9491	88	20	
	50	9.586 7332	503	9.621 7929	591	0.378 2071	9.964 9403	89	10	
43	0	9.586 7835	502	9.621 8520	591	0.378 1480	9.964 9314	88	0	17
	10	9.586 8337	503	9.621 9111	591	0.378 0889	9.964 9226	88	50	
	20	9.586 8840	503	9.621 9702	591	0.378 0298	9.964 9138	88	40	
	30	9.586 9343	503	9.622 0293	591	0.377 9707	9.964 9050	88	30	
	40	9.586 9846	502	9.622 0884	591	0.377 9116	9.964 8962	88	20	
	50	9.587 0348	503	9.622 1475	591	0.377 8525	9.964 8874	89	10	
44	0	9.587 0851	502	9.622 2066	590	0.377 7934	9.964 8785	88	0	16
	10	9.587 1353	503	9.622 2656	591	0.377 7344	9.964 8697	88	50	
	20	9.587 1856	502	9.622 3247	591	0.377 6753	9.964 8609	88	40	
	30	9.587 2358	502	9.622 3838	590	0.377 6162	9.964 8521	89	30	
	40	9.587 2860	503	9.622 4428	591	0.377 5572	9.964 8432	88	20	
	50	9.587 3363	502	9.622 5019	590	0.377 4981	9.964 8344	88	10	
45	0	9.587 3865	502	9.622 5609	590	0.377 4391	9.964 8256	89	0	15
	10	9.587 4367	502	9.622 6199	591	0.377 3801	9.964 8167	88	50	
	20	9.587 4869	502	9.622 6790	590	0.377 3210	9.964 8079	88	40	
	30	9.587 5371	502	9.622 7380	590	0.377 2620	9.964 7991	89	30	
	40	9.587 5873	502	9.622 7970	590	0.377 2030	9.964 7902	88	20	
	50	9.587 6375	501	9.622 8560	590	0.377 1440	9.964 7814	88	10	
46	0	9.587 6876	502	9.622 9150	590	0.377 0850	9.964 7726	89	0	14
	10	9.587 7378	502	9.622 9740	590	0.377 0260	9.964 7637	88	50	
	20	9.587 7880	501	9.623 0330	590	0.376 9670	9.964 7549	88	40	
	30	9.587 8381	502	9.623 0920	590	0.376 9080	9.964 7461	89	30	
	40	9.587 8883	501	9.623 1510	590	0.376 8490	9.964 7372	88	20	
	50	9.587 9384	501	9.623 2100	590	0.376 7900	9.964 7284	89	10	
47	0	9.587 9885	501	9.623 2690	590	0.376 7310	9.964 7195	88	0	13
	10	9.588 0386	502	9.623 3280	589	0.376 6720	9.964 7107	89	50	
	20	9.588 0888	501	9.623 3869	590	0.376 6131	9.964 7018	88	40	
	30	9.588 1389	501	9.623 4459	589	0.376 5541	9.964 6930	88	30	
	40	9.588 1890	501	9.623 5048	590	0.376 4952	9.964 6842	89	20	
	50	9.588 2391	501	9.623 5638	589	0.376 4362	9.964 6753	88	10	
48	0	9.588 2892	501	9.623 6227	590	0.376 3773	9.964 6665	89	0	12
	10	9.588 3393	500	9.623 6817	589	0.376 3183	9.964 6576	88	50	
	20	9.588 3893	501	9.623 7406	589	0.376 2594	9.964 6488	89	40	
	30	9.588 4394	501	9.623 7995	589	0.376 2005	9.964 6399	89	30	
	40	9.588 4895	500	9.623 8584	589	0.376 1416	9.964 6310	88	20	
	50	9.588 5395	501	9.623 9173	590	0.376 0827	9.964 6222	89	10	
49	0	9.588 5896	500	9.623 9763	589	0.376 0237	9.964 6133	88	0	11
	10	9.588 6396	501	9.624 0352	589	0.375 9648	9.964 6045	89	50	
	20	9.588 6897	500	9.624 0941	588	0.375 9059	9.964 5956	88	40	
	30	9.588 7397	500	9.624 1529	589	0.375 8471	9.964 5868	89	30	
	40	9.588 7897	500	9.624 2118	589	0.375 7882	9.964 5779	89	20	
	50	9.588 8397	500	9.624 2707	589	0.375 7293	9.964 5690	88	10	
50	0	9.588 8897		9.624 3296		0.375 6704	9.964 5602		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

67°

22°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.588 8897	500	9.624 3296	589	0.375 6704	9.964 5602	89	0	10
	10	9.588 9397	500	9.624 3885	588	0.375 6115	9.964 5513	89	50	
	20	9.588 9897	500	9.624 4473	589	0.375 5527	9.964 5424	88	40	
	30	9.589 0397	500	9.624 5062	588	0.375 4938	9.964 5336	89	30	
	40	9.589 0897	500	9.624 5650	589	0.375 4350	9.964 5247	89	20	
	50	9.589 1397	500	9.624 6239	588	0.375 3761	9.964 5158	89	10	
51	0	9.589 1897	499	9.624 6827	589	0.375 3173	9.964 5069	88	0	9
	10	9.589 2396	500	9.624 7416	588	0.375 2584	9.964 4981	89	50	
	20	9.589 2896	499	9.624 8004	588	0.375 1996	9.964 4892	89	40	
	30	9.589 3395	500	9.624 8592	588	0.375 1408	9.964 4803	89	30	
	40	9.589 3895	499	9.624 9180	588	0.375 0820	9.964 4714	88	20	
	50	9.589 4394	499	9.624 9768	588	0.375 0232	9.964 4626	89	10	
52	0	9.589 4893	500	9.625 0356	589	0.374 9644	9.964 4537	89	0	8
	10	9.589 5393	499	9.625 0945	587	0.374 9055	9.964 4448	89	50	
	20	9.589 5892	499	9.625 1532	588	0.374 8468	9.964 4359	89	40	
	30	9.589 6391	499	9.625 2120	588	0.374 7880	9.964 4270	88	30	
	40	9.589 6890	499	9.625 2708	588	0.374 7292	9.964 4182	89	20	
	50	9.589 7389	499	9.625 3296	588	0.374 6704	9.964 4093	89	10	
53	0	9.589 7888	499	9.625 3884	588	0.374 6116	9.964 4004	89	0	7
	10	9.589 8387	498	9.625 4472	587	0.374 5528	9.964 3915	89	50	
	20	9.589 8885	499	9.625 5059	588	0.374 4941	9.964 3826	89	40	
	30	9.589 9384	499	9.625 5647	587	0.374 4353	9.964 3737	89	30	
	40	9.589 9883	498	9.625 6234	588	0.374 3766	9.964 3648	89	20	
	50	9.590 0381	499	9.625 6822	587	0.374 3178	9.964 3559	89	10	
54	0	9.590 0880	498	9.625 7409	587	0.374 2591	9.964 3470	88	0	6
	10	9.590 1378	498	9.625 7996	588	0.374 2004	9.964 3382	89	50	
	20	9.590 1876	499	9.625 8584	587	0.374 1416	9.964 3293	89	40	
	30	9.590 2375	498	9.625 9171	587	0.374 0829	9.964 3204	89	30	
	40	9.590 2873	498	9.625 9758	587	0.374 0242	9.964 3115	89	20	
	50	9.590 3371	498	9.626 0345	587	0.373 9655	9.964 3026	89	10	
55	0	9.590 3869	498	9.626 0932	587	0.373 9068	9.964 2937	89	0	5
	10	9.590 4367	498	9.626 1519	587	0.373 8481	9.964 2848	89	50	
	20	9.590 4865	498	9.626 2106	587	0.373 7894	9.964 2759	89	40	
	30	9.590 5363	498	9.626 2693	587	0.373 7307	9.964 2670	90	30	
	40	9.590 5861	497	9.626 3280	587	0.373 6720	9.964 2580	89	20	
	50	9.590 6358	498	9.626 3867	587	0.373 6133	9.964 2491	89	10	
56	0	9.590 6856	498	9.626 4454	586	0.373 5546	9.964 2402	89	0	4
	10	9.590 7354	497	9.626 5040	587	0.373 4960	9.964 2313	89	50	
	20	9.590 7851	498	9.626 5627	587	0.373 4373	9.964 2224	89	40	
	30	9.590 8349	497	9.626 6214	586	0.373 3786	9.964 2135	89	30	
	40	9.590 8846	497	9.626 6800	587	0.373 3200	9.964 2046	89	20	
	50	9.590 9343	498	9.626 7387	586	0.373 2613	9.964 1957	89	10	
57	0	9.590 9841	497	9.626 7973	587	0.373 2027	9.964 1868	90	0	3
	10	9.591 0338	497	9.626 8560	586	0.373 1440	9.964 1778	89	50	
	20	9.591 0835	497	9.626 9146	586	0.373 0854	9.964 1689	89	40	
	30	9.591 1332	497	9.626 9732	586	0.373 0268	9.964 1600	89	30	
	40	9.591 1829	497	9.627 0318	586	0.372 9682	9.964 1511	89	20	
	50	9.591 2326	497	9.627 0904	587	0.372 9096	9.964 1422	90	10	
58	0	9.591 2823	497	9.627 1491	586	0.372 8509	9.964 1332	89	0	2
	10	9.591 3320	496	9.627 2077	586	0.372 7923	9.964 1243	89	50	
	20	9.591 3816	497	9.627 2663	585	0.372 7337	9.964 1154	89	40	
	30	9.591 4313	497	9.627 3248	586	0.372 6752	9.964 1065	90	30	
	40	9.591 4810	496	9.627 3834	586	0.372 6166	9.964 0975	89	20	
	50	9.591 5306	497	9.627 4420	586	0.372 5580	9.964 0886	89	10	
59	0	9.591 5803	496	9.627 5006	586	0.372 4994	9.964 0797	89	0	1
	10	9.591 6299	496	9.627 5592	585	0.372 4408	9.964 0708	90	50	
	20	9.591 6795	497	9.627 6177	586	0.372 3823	9.964 0618	89	40	
	30	9.591 7292	496	9.627 6763	585	0.372 3237	9.964 0529	89	30	
	40	9.591 7788	496	9.627 7348	586	0.372 2652	9.964 0440	90	20	
	50	9.591 8284	496	9.627 7934	585	0.372 2066	9.964 0350	89	10	
60	0	9.591 8780		9.627 8519		0.372 1481	9.964 0261		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

67°

	588
1	58.8
2	117.6
3	176.4
4	235.2
5	294.0
6	352.8
7	411.6
8	470.4
9	529.2

	587
1	58.7
2	117.4
3	176.1
4	234.8
5	293.5
6	352.2
7	410.9
8	469.6
9	528.3

	586
1	58.6
2	117.2
3	175.8
4	234.4
5	293.0
6	351.6
7	410.2
8	468.8
9	527.4

	499
1	49.9
2	99.8
3	149.7
4	199.6
5	249.5
6	299.4
7	349.3
8	399.2
9	449.1

	497
1	49.7
2	99.4
3	149.1
4	198.8
5	248.5
6	298.2
7	347.9
8	397.6
9	447.3

	89
1	8.9
2	17.8
3	26.7
4	35.6
5	44.5
6	53.4
7	62.3
8	71.2
9	80.1

23°

	585
1	58.5
2	117.0
3	175.5
4	234.0
5	292.5
6	351.0
7	409.5
8	468.0
9	526.5

	583
1	58.3
2	116.6
3	174.9
4	233.2
5	291.5
6	349.8
7	408.1
8	466.4
9	524.7

	495
1	49.5
2	99.0
3	148.5
4	198.0
5	247.5
6	297.0
7	346.5
8	396.0
9	445.5

	494
1	49.4
2	98.8
3	148.2
4	197.6
5	247.0
6	296.4
7	345.8
8	395.2
9	444.6

	493
1	49.3
2	98.6
3	147.9
4	197.2
5	246.5
6	295.8
7	345.1
8	394.4
9	443.7

	89
1	8.9
2	17.8
3	26.7
4	35.6
5	44.5
6	53.4
7	62.3
8	71.2
9	80.1

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.591 8780	496	9.627 8519	586	0.372 1481	9.964 0261	90	0	60
	10	9.591 9276	496	9.627 9105	585	0.372 0895	9.964 0171	89	50	
	20	9.591 9772	496	9.627 9690	585	0.372 0310	9.964 0082	89	40	
	30	9.592 0268	496	9.628 0275	585	0.371 9725	9.963 9993	90	30	
	40	9.592 0764	495	9.628 0860	586	0.371 9140	9.963 9903	89	20	
	50	9.592 1259	496	9.628 1446	585	0.371 8554	9.963 9814	90	10	
1	0	9.592 1755	496	9.628 2031	585	0.371 7969	9.963 9724	89	0	59
	10	9.592 2251	495	9.628 2616	585	0.371 7384	9.963 9635	90	50	
	20	9.592 2746	496	9.628 3201	585	0.371 6799	9.963 9545	89	40	
	30	9.592 3242	495	9.628 3786	585	0.371 6214	9.963 9456	90	30	
	40	9.592 3737	495	9.628 4371	584	0.371 5629	9.963 9366	89	20	
	50	9.592 4232	496	9.628 4955	585	0.371 5045	9.963 9277	90	10	
2	0	9.592 4728	495	9.628 5540	585	0.371 4460	9.963 9187	89	0	58
	10	9.592 5223	495	9.628 6125	585	0.371 3875	9.963 9098	90	50	
	20	9.592 5718	495	9.628 6710	584	0.371 3290	9.963 9008	89	40	
	30	9.592 6213	495	9.628 7294	585	0.371 2706	9.963 8919	90	30	
	40	9.592 6708	495	9.628 7879	584	0.371 2121	9.963 8829	89	20	
	50	9.592 7203	495	9.628 8463	585	0.371 1537	9.963 8740	90	10	
3	0	9.592 7698	495	9.628 9048	584	0.371 0952	9.963 8650	89	0	57
	10	9.592 8193	494	9.628 9632	584	0.371 0368	9.963 8561	90	50	
	20	9.592 8687	495	9.629 0216	585	0.370 9784	9.963 8471	90	40	
	30	9.592 9182	495	9.629 0801	584	0.370 9199	9.963 8381	89	30	
	40	9.592 9677	494	9.629 1385	584	0.370 8615	9.963 8292	90	20	
	50	9.593 0171	495	9.629 1969	584	0.370 8031	9.963 8202	90	10	
4	0	9.593 0666	494	9.629 2553	584	0.370 7447	9.963 8112	89	0	56
	10	9.593 1160	494	9.629 3137	584	0.370 6863	9.963 8023	90	50	
	20	9.593 1654	495	9.629 3721	584	0.370 6279	9.963 7933	90	40	
	30	9.593 2149	494	9.629 4305	584	0.370 5695	9.963 7843	89	30	
	40	9.593 2643	494	9.629 4889	584	0.370 5111	9.963 7754	90	20	
	50	9.593 3137	494	9.629 5473	584	0.370 4527	9.963 7664	90	10	
5	0	9.593 3631	494	9.629 6057	584	0.370 3943	9.963 7574	90	0	55
	10	9.593 4125	494	9.629 6641	583	0.370 3359	9.963 7484	89	50	
	20	9.593 4619	494	9.629 7224	584	0.370 2776	9.963 7395	90	40	
	30	9.593 5113	494	9.629 7808	583	0.370 2192	9.963 7305	90	30	
	40	9.593 5607	493	9.629 8391	584	0.370 1609	9.963 7215	90	20	
	50	9.593 6100	494	9.629 8975	583	0.370 1025	9.963 7125	89	10	
6	0	9.593 6594	494	9.629 9558	584	0.370 0442	9.963 7036	90	0	54
	10	9.593 7088	493	9.630 0142	583	0.369 9858	9.963 6946	90	50	
	20	9.593 7581	494	9.630 0725	583	0.369 9275	9.963 6856	90	40	
	30	9.593 8075	493	9.630 1308	584	0.369 8692	9.963 6766	90	30	
	40	9.593 8568	493	9.630 1892	583	0.369 8108	9.963 6676	90	20	
	50	9.593 9061	494	9.630 2475	583	0.369 7525	9.963 6586	90	10	
7	0	9.593 9555	493	9.630 3058	583	0.369 6942	9.963 6496	89	0	53
	10	9.594 0048	493	9.630 3641	583	0.369 6359	9.963 6407	90	50	
	20	9.594 0541	493	9.630 4224	583	0.369 5776	9.963 6317	90	40	
	30	9.594 1034	493	9.630 4807	583	0.369 5193	9.963 6227	90	30	
	40	9.594 1527	493	9.630 5390	583	0.369 4610	9.963 6137	90	20	
	50	9.594 2020	493	9.630 5973	583	0.369 4027	9.963 6047	90	10	
8	0	9.594 2513	493	9.630 6556	583	0.369 3444	9.963 5957	90	0	52
	10	9.594 3006	492	9.630 7139	582	0.369 2861	9.963 5867	90	50	
	20	9.594 3498	493	9.630 7721	583	0.369 2279	9.963 5777	90	40	
	30	9.594 3991	493	9.630 8304	583	0.369 1696	9.963 5687	90	30	
	40	9.594 4484	492	9.630 8887	582	0.369 1113	9.963 5597	90	20	
	50	9.594 4976	493	9.630 9469	583	0.369 0531	9.963 5507	90	10	
9	0	9.594 5469	492	9.631 0052	582	0.368 9948	9.963 5417	90	0	51
	10	9.594 5961	492	9.631 0634	582	0.368 9366	9.963 5327	90	50	
	20	9.594 6453	493	9.631 1216	583	0.368 8784	9.963 5237	90	40	
	30	9.594 6946	492	9.631 1799	582	0.368 8201	9.963 5147	90	30	
	40	9.594 7438	492	9.631 2381	582	0.368 7619	9.963 5057	90	20	
	50	9.594 7930	492	9.631 2963	582	0.368 7037	9.963 4967	90	10	
10	0	9.594 8422		9.631 3545		0.368 6455	9.963 4877		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

66°

23°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.594 8422	492	9.631 3545	582	0.368 6455	9.963 4877	90	0	50
	10	9.594 8914	492	9.631 4127	583	0.368 5873	9.963 4787	91	50	
	20	9.594 9406	492	9.631 4710	582	0.368 5290	9.963 4696	90	40	
	30	9.594 9898	492	9.631 5292	582	0.368 4708	9.963 4606	90	30	
	40	9.595 0390	491	9.631 5874	581	6.368 4126	9.963 4516	90	20	
	50	9.595 0881	492	9.631 6455	582	0.368 3545	9.963 4426	90	10	
11	0	9.595 1373	492	9.631 7037	582	0.368 2963	9.963 4336	90	0	49
	10	9.595 1865	491	9.631 7619	582	0.368 2381	9.963 4246	90	50	
	20	9.595 2356	492	9.631 8201	581	0.368 1799	9.963 4156	91	40	
	30	9.595 2848	491	9.631 8782	582	0.368 1218	9.963 4065	90	30	
	40	9.595 3339	492	9.631 9364	582	0.368 0636	9.963 3975	90	20	
	50	9.595 3831	491	9.631 9946	581	0.368 0054	9.963 3885	90	10	
12	0	9.595 4322	491	9.632 0527	582	0.367 9473	9.963 3795	91	0	48
	10	9.595 4813	491	9.632 1109	581	0.367 8891	9.963 3704	90	50	
	20	9.595 5304	491	9.632 1690	581	0.367 8310	9.963 3614	90	40	
	30	9.595 5795	491	9.632 2271	582	0.367 7729	9.963 3524	90	30	
	40	9.595 6286	491	9.632 2853	581	0.367 7147	9.963 3434	91	20	
	50	9.595 6777	491	9.632 3434	581	0.367 6566	9.963 3343	90	10	
13	0	9.595 7268	491	9.632 4015	581	0.367 5985	9.963 3253	90	0	47
	10	9.595 7759	491	9.632 4596	581	0.367 5404	9.963 3163	91	50	
	20	9.595 8250	490	9.632 5177	582	0.367 4823	9.963 3072	90	40	
	30	9.595 8740	491	9.632 5759	581	0.367 4241	9.963 2982	90	30	
	40	9.595 9231	491	9.632 6340	580	0.367 3660	9.963 2892	91	20	
	50	9.595 9722	490	9.632 6920	581	0.367 3080	9.963 2801	90	10	
14	0	9.596 0212	491	9.632 7501	581	0.367 2499	9.963 2711	91	0	46
	10	9.596 0703	490	9.632 8082	581	0.367 1918	9.963 2620	90	50	
	20	9.596 1193	490	9.632 8663	581	0.367 1337	9.963 2530	90	40	
	30	9.596 1683	491	9.632 9244	580	0.367 0756	9.963 2440	91	30	
	40	9.596 2174	490	9.632 9824	581	0.367 0176	9.963 2349	90	20	
	50	9.596 2664	490	9.633 0405	580	0.366 9595	9.963 2259	91	10	
15	0	9.596 3154	490	9.633 0985	581	0.366 9015	9.963 2168	90	0	45
	10	9.596 3644	490	9.633 1566	580	0.366 8434	9.963 2078	91	50	
	20	9.596 4134	490	9.633 2146	581	0.366 7854	9.963 1987	90	40	
	30	9.596 4624	490	9.633 2727	580	0.366 7273	9.963 1897	91	30	
	40	9.596 5114	489	9.633 3307	580	0.366 6693	9.963 1806	90	20	
	50	9.596 5603	490	9.633 3887	581	0.366 6113	9.963 1716	91	10	
16	0	9.596 6093	490	9.633 4468	580	0.366 5532	9.963 1625	90	0	44
	10	9.596 6583	489	9.633 5048	580	0.366 4952	9.963 1535	91	50	
	20	9.596 7072	490	9.633 5628	580	0.366 4372	9.963 1444	90	40	
	30	9.596 7562	489	9.633 6208	580	0.366 3792	9.963 1354	91	30	
	40	9.596 8051	490	9.633 6788	580	0.366 3212	9.963 1263	90	20	
	50	9.596 8541	489	9.633 7368	580	0.366 2632	9.963 1173	91	10	
17	0	9.596 9030	489	9.633 7948	580	0.366 2052	9.963 1082	91	0	43
	10	9.596 9519	489	9.633 8528	580	0.366 1472	9.963 0991	90	50	
	20	9.597 0008	490	9.633 9108	579	0.366 0892	9.963 0901	91	40	
	30	9.597 0498	489	9.633 9687	580	0.366 0313	9.963 0810	91	30	
	40	9.597 0987	489	9.634 0267	580	0.365 9733	9.963 0719	90	20	
	50	9.597 1476	489	9.634 0847	579	0.365 9153	9.963 0629	91	10	
18	0	9.597 1965	488	9.634 1426	580	0.365 8574	9.963 0538	91	0	42
	10	9.597 2453	489	9.634 2006	579	0.365 7994	9.963 0447	90	50	
	20	9.597 2942	489	9.634 2585	580	0.365 7415	9.963 0357	91	40	
	30	9.597 3431	489	9.634 3165	579	0.365 6835	9.963 0266	91	30	
	40	9.597 3920	488	9.634 3744	580	0.365 6256	9.963 0175	90	20	
	50	9.597 4408	489	9.634 4324	579	0.365 5676	9.963 0085	91	10	
19	0	9.597 4897	488	9.634 4903	579	0.365 5097	9.962 9994	91	0	41
	10	9.597 5385	489	9.634 5482	579	0.365 4518	9.962 9903	91	50	
	20	9.597 5874	488	9.634 6061	579	0.365 3939	9.962 9812	91	40	
	30	9.597 6362	488	9.634 6640	580	0.365 3360	9.962 9721	90	30	
	40	9.597 6850	488	9.634 7220	579	0.365 2780	9.962 9631	91	20	
	50	9.597 7338	489	9.634 7799	579	0.365 2201	9.962 9540	91	10	
20	0	9.597 7827		9.634 8378		0.365 1622	9.962 9449		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

66°

582	
1	58.2
2	116.4
3	174.6
4	232.8
5	291.0
6	349.2
7	407.4
8	465.6
9	523.8

581	
1	58.1
2	116.2
3	174.3
4	232.4
5	290.5
6	348.6
7	406.7
8	464.8
9	522.9

579	
1	57.9
2	115.8
3	173.7
4	231.6
5	289.5
6	347.4
7	405.3
8	463.2
9	521.1

491	
1	49.1
2	98.2
3	147.3
4	196.4
5	245.5
6	294.6
7	343.7
8	392.8
9	441.9

489	
1	48.9
2	97.8
3	146.7
4	195.6
5	244.5
6	293.4
7	342.3
8	391.2
9	440.1

91	
1	9.1
2	18.2
3	27.3
4	36.4
5	45.5
6	54.6
7	63.7
8	72.8
9	81.9

23°

	578
1	57.8
2	115.6
3	173.4
4	231.2
5	289.0
6	346.8
7	404.6
8	462.4
9	520.2

	577
1	57.7
2	115.4
3	173.1
4	230.8
5	288.5
6	346.2
7	403.9
8	461.6
9	519.3

	576
1	57.6
2	115.2
3	172.8
4	230.4
5	288.0
6	345.6
7	403.2
8	460.8
9	518.4

	488
1	48.8
2	97.6
3	146.4
4	195.2
5	244.0
6	292.8
7	341.6
8	390.4
9	439.2

	486
1	48.6
2	97.2
3	145.8
4	194.4
5	243.0
6	291.6
7	340.2
8	388.8
9	437.4

	91
1	9.1
2	18.2
3	27.3
4	36.4
5	45.5
6	54.6
7	63.7
8	72.8
9	81.9

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.597 7827	488	9.634 8378	578	0.365 1622	9.962 9449	91	0	40
	10	9.597 8315	488	9.634 8956	579	0.365 1044	9.962 9358	91	50	
	20	9.597 8803	488	9.634 9535	579	0.365 0465	9.962 9267	90	40	
	30	9.597 9291	488	9.635 0114	579	0.364 9886	9.962 9177	91	30	
	40	9.597 9779	487	9.635 0693	579	0.364 9307	9.962 9086	91	20	
	50	9.598 0266	488	9.635 1272	578	0.364 8728	9.962 8995	91	10	
21	0	9.598 0754	488	9.635 1850	579	0.364 8150	9.962 8904	91	0	39
	10	9.598 1242	487	9.635 2429	578	0.364 7571	9.962 8813	91	50	
	20	9.598 1729	488	9.635 3007	579	0.364 6993	9.962 8722	91	40	
	30	9.598 2217	487	9.635 3586	578	0.364 6414	9.962 8631	91	30	
	40	9.598 2704	488	9.635 4164	579	0.364 5836	9.962 8540	91	20	
	50	9.598 3192	487	9.635 4743	578	0.364 5257	9.962 8449	91	10	
22	0	9.598 3679	488	9.635 5321	578	0.364 4679	9.962 8358	91	0	38
	10	9.598 4167	487	9.635 5899	578	0.364 4101	9.962 8267	91	50	
	20	9.598 4654	487	9.635 6477	579	0.364 3523	9.962 8176	91	40	
	30	9.598 5141	487	9.635 7056	578	0.364 2944	9.962 8085	91	30	
	40	9.598 5628	487	9.635 7634	578	0.364 2366	9.962 7994	91	20	
	50	9.598 6115	487	9.635 8212	578	0.364 1788	9.962 7903	91	10	
23	0	9.598 6602	487	9.635 8790	578	0.364 1210	9.962 7812	91	0	37
	10	9.598 7089	487	9.635 9368	578	0.364 0632	9.962 7721	91	50	
	20	9.598 7576	487	9.635 9946	578	0.364 0054	9.962 7630	91	40	
	30	9.598 8063	486	9.636 0524	577	0.363 9476	9.962 7539	91	30	
	40	9.598 8549	487	9.636 1101	578	0.363 8899	9.962 7448	91	20	
	50	9.598 9036	487	9.636 1679	578	0.363 8321	9.962 7357	91	10	
24	0	9.598 9523	486	9.636 2257	577	0.363 7743	9.962 7266	91	0	36
	10	9.599 0009	487	9.636 2834	578	0.363 7166	9.962 7175	91	50	
	20	9.599 0496	486	9.636 3412	578	0.363 6588	9.962 7084	92	40	
	30	9.599 0982	486	9.636 3990	577	0.363 6010	9.962 6992	91	30	
	40	9.599 1468	487	9.636 4567	577	0.363 5433	9.962 6901	91	20	
	50	9.599 1955	486	9.636 5144	578	0.363 4856	9.962 6810	91	10	
25	0	9.599 2441	486	9.636 5722	577	0.363 4278	9.962 6719	91	0	35
	10	9.599 2927	486	9.636 6299	577	0.363 3701	9.962 6628	91	50	
	20	9.599 3413	486	9.636 6876	578	0.363 3124	9.962 6537	92	40	
	30	9.599 3899	486	9.636 7454	577	0.363 2546	9.962 6445	91	30	
	40	9.599 4385	486	9.636 8031	577	0.363 1969	9.962 6354	91	20	
	50	9.599 4871	486	9.636 8608	577	0.363 1392	9.962 6263	91	10	
26	0	9.599 5357	485	9.636 9185	577	0.363 0815	9.962 6172	92	0	34
	10	9.599 5842	486	9.636 9762	577	0.363 0238	9.962 6080	91	50	
	20	9.599 6328	486	9.637 0339	577	0.362 9661	9.962 5989	91	40	
	30	9.599 6814	485	9.637 0916	577	0.362 9084	9.962 5898	92	30	
	40	9.599 7299	486	9.637 1493	577	0.362 8507	9.962 5806	91	20	
	50	9.599 7785	485	9.637 2070	576	0.362 7930	9.962 5715	91	10	
27	0	9.599 8270	486	9.637 2646	577	0.362 7354	9.962 5624	92	0	33
	10	9.599 8756	485	9.637 3223	577	0.362 6777	9.962 5532	91	50	
	20	9.599 9241	485	9.637 3800	576	0.362 6200	9.962 5441	91	40	
	30	9.599 9726	485	9.637 4376	577	0.362 5624	9.962 5350	92	30	
	40	9.600 0211	485	9.637 4953	576	0.362 5047	9.962 5258	91	20	
	50	9.600 0696	485	9.637 5529	577	0.362 4471	9.962 5167	91	10	
28	0	9.600 1181	485	9.637 6106	576	0.362 3894	9.962 5076	92	0	32
	10	9.600 1666	485	9.637 6682	576	0.362 3318	9.962 4984	91	50	
	20	9.600 2151	485	9.637 7258	577	0.362 2742	9.962 4893	92	40	
	30	9.600 2636	485	9.637 7835	576	0.362 2165	9.962 4801	91	30	
	40	9.600 3121	485	9.637 8411	576	0.362 1589	9.962 4710	92	20	
	50	9.600 3606	484	9.637 8987	576	0.362 1013	9.962 4618	91	10	
29	0	9.600 4090	485	9.637 9563	576	0.362 0437	9.962 4527	92	0	31
	10	9.600 4575	484	9.638 0139	576	0.361 9861	9.962 4435	91	50	
	20	9.600 5059	485	9.638 0715	576	0.361 9285	9.962 4344	92	40	
	30	9.600 5544	484	9.638 1291	576	0.361 8709	9.962 4252	91	30	
	40	9.600 6028	485	9.638 1867	576	0.361 8133	9.962 4161	92	20	
	50	9.600 6513	484	9.638 2443	576	0.361 7557	9.962 4069	91	10	
30	0	9.600 6997		9.638 3019		0.361 6981	9.962 3978		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

66°

23°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.600 6997	484	9.638 3019	576	0.361 6981	9.962 3978	92	0	30
	10	9.600 7481	484	9.638 3595	575	0.361 6405	9.962 3886	91	50	
	20	9.600 7965	484	9.638 4170	576	0.361 5830	9.962 3795	92	40	
	30	9.600 8449	484	9.638 4746	576	0.361 5254	9.962 3703	91	30	
	40	9.600 8933	484	9.638 5322	575	0.361 4678	9.962 3612	92	20	
	50	9.600 9417	484	9.638 5897	576	0.361 4103	9.962 3520	92	10	
31	0	9.600 9901	484	9.638 6473	575	0.361 3527	9.962 3428	91	0	29
	10	9.601 0385	484	9.638 7048	576	0.361 2952	9.962 3337	92	50	
	20	9.601 0869	483	9.638 7624	575	0.361 2376	9.962 3245	92	40	
	30	9.601 1352	484	9.638 8199	575	0.361 1801	9.962 3153	91	30	
	40	9.601 1836	484	9.638 8774	575	0.361 1226	9.962 3062	92	20	
	50	9.601 2320	483	9.638 9349	576	0.361 0651	9.962 2970	92	10	
32	0	9.601 2803	483	9.638 9925	575	0.361 0075	9.962 2878	91	0	28
	10	9.601 3286	484	9.639 0500	575	0.360 9500	9.962 2787	92	50	
	20	9.601 3770	483	9.639 1075	575	0.360 8925	9.962 2695	92	40	
	30	9.601 4253	483	9.639 1650	575	0.360 8350	9.962 2603	92	30	
	40	9.601 4736	484	9.639 2225	575	0.360 7775	9.962 2511	91	20	
	50	9.601 5220	483	9.639 2800	575	0.360 7200	9.962 2420	92	10	
33	0	9.601 5703	483	9.639 3375	575	0.360 6625	9.962 2328	92	0	27
	10	9.601 6186	483	9.639 3950	574	0.360 6050	9.962 2236	92	50	
	20	9.601 6669	483	9.639 4524	575	0.360 5476	9.962 2144	91	40	
	30	9.601 7152	483	9.639 5099	575	0.360 4901	9.962 2053	92	30	
	40	9.601 7635	482	9.639 5674	574	0.360 4326	9.962 1961	92	20	
	50	9.601 8117	483	9.639 6248	575	0.360 3752	9.962 1869	92	10	
34	0	9.601 8600	483	9.639 6823	574	0.360 3177	9.962 1777	92	0	26
	10	9.601 9083	482	9.639 7397	575	0.360 2603	9.962 1685	92	50	
	20	9.601 9565	483	9.639 7972	574	0.360 2028	9.962 1593	91	40	
	30	9.602 0048	482	9.639 8546	575	0.360 1454	9.962 1502	92	30	
	40	9.602 0530	483	9.639 9121	574	0.360 0879	9.962 1410	92	20	
	50	9.602 1013	482	9.639 9695	574	0.360 0305	9.962 1318	92	10	
35	0	9.602 1495	482	9.640 0269	574	0.359 9731	9.962 1226	92	0	25
	10	9.602 1977	483	9.640 0843	575	0.359 9157	9.962 1134	92	50	
	20	9.602 2460	482	9.640 1418	574	0.359 8582	9.962 1042	92	40	
	30	9.602 2942	482	9.640 1992	574	0.359 8008	9.962 0950	92	30	
	40	9.602 3424	482	9.640 2566	574	0.359 7434	9.962 0858	92	20	
	50	9.602 3906	482	9.640 3140	574	0.359 6860	9.962 0766	92	10	
36	0	9.602 4388	482	9.640 3714	574	0.359 6286	9.962 0674	92	0	24
	10	9.602 4870	482	9.640 4288	573	0.359 5712	9.962 0582	92	50	
	20	9.602 5352	481	9.640 4861	574	0.359 5139	9.962 0490	92	40	
	30	9.602 5833	482	9.640 5435	574	0.359 4565	9.962 0398	92	30	
	40	9.602 6315	482	9.640 6009	574	0.359 3991	9.962 0306	92	20	
	50	9.602 6797	481	9.640 6583	573	0.359 3417	9.962 0214	92	10	
37	0	9.602 7278	482	9.640 7156	574	0.359 2844	9.962 0122	92	0	23
	10	9.602 7760	481	9.640 7730	573	0.359 2270	9.962 0030	92	50	
	20	9.602 8241	482	9.640 8303	574	0.359 1697	9.961 9938	92	40	
	30	9.602 8723	481	9.640 8877	573	0.359 1123	9.961 9846	92	30	
	40	9.602 9204	481	9.640 9450	574	0.359 0550	9.961 9754	92	20	
	50	9.602 9685	481	9.641 0024	573	0.358 9976	9.961 9662	93	10	
38	0	9.603 0166	482	9.641 0597	573	0.358 9403	9.961 9569	92	0	22
	10	9.603 0648	481	9.641 1170	574	0.358 8830	9.961 9477	92	50	
	20	9.603 1129	481	9.641 1744	573	0.358 8256	9.961 9385	92	40	
	30	9.603 1610	481	9.641 2317	573	0.358 7683	9.961 9293	92	30	
	40	9.603 2091	481	9.641 2890	573	0.358 7110	9.961 9201	92	20	
	50	9.603 2572	480	9.641 3463	573	0.358 6537	9.961 9109	93	10	
39	0	9.603 3052	481	9.641 4036	573	0.358 5964	9.961 9016	92	0	21
	10	9.603 3533	481	9.641 4609	573	0.358 5391	9.961 8924	92	50	
	20	9.603 4014	480	9.641 5182	573	0.358 4818	9.961 8832	92	40	
	30	9.603 4494	481	9.641 5755	573	0.358 4245	9.961 8740	93	30	
	40	9.603 4975	481	9.641 6328	572	0.358 3672	9.961 8647	92	20	
	50	9.603 5456	480	9.641 6900	573	0.358 3100	9.961 8555	92	10	
40	0	9.603 5936		9.641 7473		0.358 2527	9.961 8463		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

66°

	574
1	57.4
2	114.8
3	172.2
4	229.6
5	287.0
6	344.4
7	401.8
8	459.2
9	516.6

	573
1	57.3
2	114.6
3	171.9
4	229.2
5	286.5
6	343.8
7	401.1
8	458.4
9	515.7

	485
1	48.5
2	97.0
3	145.5
4	194.0
5	242.5
6	291.0
7	339.5
8	388.0
9	436.5

	483
1	48.3
2	96.6
3	144.9
4	193.2
5	241.5
6	289.8
7	338.1
8	386.4
9	434.7

	481
1	48.1
2	96.2
3	144.3
4	192.4
5	240.5
6	288.6
7	336.7
8	384.8
9	432.9

	92
1	9.2
2	18.4
3	27.6
4	36.8
5	46.0
6	55.2
7	64.4
8	73.6
9	82.8

23°

572	
1	57.2
2	114.4
3	171.6
4	228.8
5	286.0
6	343.2
7	400.4
8	457.6
9	514.8

571	
1	57.1
2	114.2
3	171.3
4	228.4
5	285.5
6	342.6
7	399.7
8	456.8
9	513.9

479	
1	47.9
2	95.8
3	143.7
4	191.6
5	239.5
6	287.4
7	335.3
8	383.2
9	431.1

478	
1	47.8
2	95.6
3	143.4
4	191.2
5	239.0
6	286.8
7	334.6
8	382.4
9	430.2

477	
1	47.7
2	95.4
3	143.1
4	190.8
5	238.5
6	286.2
7	333.9
8	381.6
9	429.3

93	
1	9.3
2	18.6
3	27.9
4	37.2
5	46.5
6	55.8
7	65.1
8	74.4
9	83.7

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.603 5936	480	9.641 7473	573	0.358 2527	9.961 8463	92	0	20
	10	9.603 6416	481	9.641 8046	572	0.358 1954	9.961 8371	93	50	
	20	9.603 6897	480	9.641 8618	573	0.358 1382	9.961 8278	92	40	
	30	9.603 7377	480	9.641 9191	572	0.358 0809	9.961 8186	92	30	
	40	9.603 7857	480	9.641 9763	573	0.358 0237	9.961 8094	93	20	
	50	9.603 8337	480	9.642 0336	572	0.357 9664	9.961 8001	92	10	
41	0	9.603 8817	480	9.642 0908	573	0.357 9092	9.961 7909	92	0	19
	10	9.603 9297	480	9.642 1481	572	0.357 8519	9.961 7817	93	50	
	20	9.603 9777	480	9.642 2053	572	0.357 7947	9.961 7724	92	40	
	30	9.604 0257	480	9.642 2625	572	0.357 7375	9.961 7632	92	30	
	40	9.604 0737	480	9.642 3197	572	0.357 6803	9.961 7540	93	20	
	50	9.604 1217	479	9.642 3769	573	0.357 6231	9.961 7447	92	10	
42	0	9.604 1696	480	9.642 4342	572	0.357 5658	9.961 7355	93	0	18
	10	9.604 2176	479	9.642 4914	572	0.357 5086	9.961 7262	92	50	
	20	9.604 2655	480	9.642 5486	572	0.357 4514	9.961 7170	93	40	
	30	9.604 3135	479	9.642 6058	571	0.357 3942	9.961 7077	92	30	
	40	9.604 3614	480	9.642 6629	572	0.357 3371	9.961 6985	93	20	
	50	9.604 4094	479	9.642 7201	572	0.357 2799	9.961 6892	92	10	
43	0	9.604 4573	479	9.642 7773	572	0.357 2227	9.961 6800	93	0	17
	10	9.604 5052	479	9.642 8345	572	0.357 1655	9.961 6707	92	50	
	20	9.604 5531	480	9.642 8917	571	0.357 1083	9.961 6615	93	40	
	30	9.604 6011	479	9.642 9488	572	0.357 0512	9.961 6522	92	30	
	40	9.604 6490	479	9.643 0060	571	0.356 9940	9.961 6430	93	20	
	50	9.604 6969	479	9.643 0631	572	0.356 9369	9.961 6337	92	10	
44	0	9.604 7448	478	9.643 1203	571	0.356 8797	9.961 6245	93	0	16
	10	9.604 7926	479	9.643 1774	572	0.356 8226	9.961 6152	92	50	
	20	9.604 8405	479	9.643 2346	571	0.356 7654	9.961 6060	93	40	
	30	9.604 8884	479	9.643 2917	571	0.356 7083	9.961 5967	93	30	
	40	9.604 9363	478	9.643 3488	572	0.356 6512	9.961 5874	92	20	
	50	9.604 9841	479	9.643 4060	571	0.356 5940	9.961 5782	93	10	
45	0	9.605 0320	478	9.643 4631	571	0.356 5369	9.961 5689	93	0	15
	10	9.605 0798	479	9.643 5202	571	0.356 4798	9.961 5596	92	50	
	20	9.605 1277	478	9.643 5773	571	0.356 4227	9.961 5504	93	40	
	30	9.605 1755	478	9.643 6344	571	0.356 3656	9.961 5411	93	30	
	40	9.605 2233	479	9.643 6915	571	0.356 3085	9.961 5318	92	20	
	50	9.605 2712	478	9.643 7486	571	0.356 2514	9.961 5226	93	10	
46	0	9.605 3190	478	9.643 8057	571	0.356 1943	9.961 5133	93	0	14
	10	9.605 3668	478	9.643 8628	570	0.356 1372	9.961 5040	92	50	
	20	9.605 4146	478	9.643 9198	571	0.356 0802	9.961 4948	93	40	
	30	9.605 4624	478	9.643 9769	571	0.356 0231	9.961 4855	93	30	
	40	9.605 5102	478	9.644 0340	570	0.355 9660	9.961 4762	93	20	
	50	9.605 5580	477	9.644 0910	571	0.355 9090	9.961 4669	93	10	
47	0	9.605 6057	478	9.644 1481	571	0.355 8519	9.961 4576	92	0	13
	10	9.605 6535	478	9.644 2052	570	0.355 7948	9.961 4484	93	50	
	20	9.605 7013	477	9.644 2622	570	0.355 7378	9.961 4391	93	40	
	30	9.605 7490	478	9.644 3192	571	0.355 6808	9.961 4298	93	30	
	40	9.605 7968	477	9.644 3763	570	0.355 6237	9.961 4205	93	20	
	50	9.605 8445	478	9.644 4333	570	0.355 5667	9.961 4112	92	10	
48	0	9.605 8923	477	9.644 4903	571	0.355 5097	9.961 4020	93	0	12
	10	9.605 9400	478	9.644 5474	570	0.355 4526	9.961 3927	93	50	
	20	9.605 9878	477	9.644 6044	570	0.355 3956	9.961 3834	93	40	
	30	9.606 0355	477	9.644 6614	570	0.355 3386	9.961 3741	93	30	
	40	9.606 0832	477	9.644 7184	570	0.355 2816	9.961 3648	93	20	
	50	9.606 1309	477	9.644 7754	570	0.355 2246	9.961 3555	93	10	
49	0	9.606 1786	477	9.644 8324	570	0.355 1676	9.961 3462	93	0	11
	10	9.606 2263	477	9.644 8894	570	0.355 1106	9.961 3369	93	50	
	20	9.606 2740	477	9.644 9464	570	0.355 0536	9.961 3276	93	40	
	30	9.606 3217	477	9.645 0034	569	0.354 9966	9.961 3183	93	30	
	40	9.606 3694	476	9.645 0603	570	0.354 9397	9.961 3090	93	20	
	50	9.606 4170	477	9.645 1173	570	0.354 8827	9.961 2997	93	10	
50	0	9.606 4647		9.645 1743		0.354 8257	9.961 2904		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

66°

23°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.606 4647	477	9.645 1743	569	0.354 8257	9.961 2904	93	0	10
	10	9.606 5124	476	9.645 2312	570	0.354 7688	9.961 2811	93	50	
	20	9.606 5600	477	9.645 2882	569	0.354 7118	9.961 2718	93	40	
	30	9.606 6077	476	9.645 3451	570	0.354 6549	9.961 2625	93	30	
	40	9.606 6553	476	9.645 4021	569	0.354 5979	9.961 2532	93	20	
	50	9.606 7029	477	9.645 4590	570	0.354 5410	9.961 2439	93	10	
51	0	9.606 7506	476	9.645 5160	569	0.354 4840	9.961 2346	93	0	9
	10	9.606 7982	476	9.645 5729	569	0.354 4271	9.961 2253	93	50	
	20	9.606 8458	476	9.645 6298	570	0.354 3702	9.961 2160	93	40	
	30	9.606 8934	476	9.645 6868	569	0.354 3132	9.961 2067	93	30	
	40	9.606 9410	476	9.645 7437	569	0.354 2563	9.961 1974	94	20	
	50	9.606 9886	476	9.645 8006	569	0.354 1994	9.961 1880	93	10	
52	0	9.607 0362	476	9.645 8575	569	0.354 1425	9.961 1787	93	0	8
	10	9.607 0838	476	9.645 9144	569	0.354 0856	9.961 1694	93	50	
	20	9.607 1314	475	9.645 9713	569	0.354 0287	9.961 1601	93	40	
	30	9.607 1789	476	9.646 0282	569	0.353 9718	9.961 1508	93	30	
	40	9.607 2265	476	9.646 0851	568	0.353 9149	9.961 1415	94	20	
	50	9.607 2741	475	9.646 1419	569	0.353 8581	9.961 1321	93	10	
53	0	9.607 3216	476	9.646 1988	569	0.353 8012	9.961 1228	93	0	7
	10	9.607 3692	475	9.646 2557	569	0.353 7443	9.961 1135	93	50	
	20	9.607 4167	476	9.646 3126	568	0.353 6874	9.961 1042	94	40	
	30	9.607 4643	475	9.646 3694	569	0.353 6306	9.961 0948	93	30	
	40	9.607 5118	475	9.646 4263	568	0.353 5737	9.961 0855	93	20	
	50	9.607 5593	475	9.646 4831	569	0.353 5169	9.961 0762	94	10	
54	0	9.607 6068	475	9.646 5400	568	0.353 4600	9.961 0668	93	0	6
	10	9.607 6543	475	9.646 5968	569	0.353 4032	9.961 0575	93	50	
	20	9.607 7018	475	9.646 6537	568	0.353 3463	9.961 0482	93	40	
	30	9.607 7493	475	9.646 7105	568	0.353 2895	9.961 0389	94	30	
	40	9.607 7968	475	9.646 7673	568	0.353 2327	9.961 0295	93	20	
	50	9.607 8443	475	9.646 8241	569	0.353 1759	9.961 0202	94	10	
55	0	9.607 8918	475	9.646 8810	568	0.353 1190	9.961 0108	93	0	5
	10	9.607 9393	474	9.646 9378	568	0.353 0622	9.961 0015	93	50	
	20	9.607 9867	475	9.646 9946	568	0.353 0054	9.960 9922	94	40	
	30	9.608 0342	475	9.647 0514	568	0.352 9486	9.960 9828	93	30	
	40	9.608 0817	474	9.647 1082	568	0.352 8918	9.960 9735	94	20	
	50	9.608 1291	474	9.647 1650	567	0.352 8350	9.960 9641	93	10	
56	0	9.608 1765	475	9.647 2217	568	0.352 7783	9.960 9548	94	0	4
	10	9.608 2240	474	9.647 2785	568	0.352 7215	9.960 9454	93	50	
	20	9.608 2714	474	9.647 3353	568	0.352 6647	9.960 9361	93	40	
	30	9.608 3188	474	9.647 3921	567	0.352 6079	9.960 9268	94	30	
	40	9.608 3662	475	9.647 4488	568	0.352 5512	9.960 9174	93	20	
	50	9.608 4137	474	9.647 5056	568	0.352 4944	9.960 9081	94	10	
57	0	9.608 4611	474	9.647 5624	567	0.352 4376	9.960 8987	93	0	3
	10	9.608 5085	474	9.647 6191	568	0.352 3809	9.960 8894	94	50	
	20	9.608 5559	473	9.647 6759	567	0.352 3241	9.960 8800	94	40	
	30	9.608 6032	474	9.647 7326	567	0.352 2674	9.960 8706	93	30	
	40	9.608 6506	474	9.647 7893	568	0.352 2107	9.960 8613	94	20	
	50	9.608 6980	474	9.647 8461	567	0.352 1539	9.960 8519	93	10	
58	0	9.608 7454	473	9.647 9028	567	0.352 0972	9.960 8426	94	0	2
	10	9.608 7927	474	9.647 9595	567	0.352 0405	9.960 8332	94	50	
	20	9.608 8401	473	9.648 0162	568	0.351 9838	9.960 8238	93	40	
	30	9.608 8874	474	9.648 0730	567	0.351 9270	9.960 8145	94	30	
	40	9.608 9348	473	9.648 1297	567	0.351 8703	9.960 8051	93	20	
	50	9.608 9821	473	9.648 1864	567	0.351 8136	9.960 7958	94	10	
59	0	9.609 0294	474	9.648 2431	566	0.351 7569	9.960 7864	94	0	1
	10	9.609 0768	473	9.648 2997	567	0.351 7003	9.960 7770	93	50	
	20	9.609 1241	473	9.648 3564	567	0.351 6436	9.960 7677	94	40	
	30	9.609 1714	473	9.648 4131	567	0.351 5869	9.960 7583	94	30	
	40	9.609 2187	473	9.648 4698	567	0.351 5302	9.960 7489	94	20	
	50	9.609 2660	473	9.648 5265	566	0.351 4735	9.960 7395	93	10	
60	0	9.609 3133		9.648 5831		0.351 4169	9.960 7302		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

66°

	569
1	56.9
2	113.8
3	170.7
4	227.6
5	284.5
6	341.4
7	398.3
8	455.2
9	512.1

	568
1	56.8
2	113.6
3	170.4
4	227.2
5	284.0
6	340.8
7	397.6
8	454.4
9	511.2

	567
1	56.7
2	113.4
3	170.1
4	226.8
5	283.5
6	340.2
7	396.9
8	453.6
9	510.3

	475
1	47.5
2	95.0
3	142.5
4	190.0
5	237.5
6	285.0
7	332.5
8	380.0
9	427.5

	474
1	47.4
2	94.8
3	142.2
4	189.6
5	237.0
6	284.4
7	331.8
8	379.2
9	426.6

	94
1	9.4
2	18.8
3	28.2
4	37.6
5	47.0
6	56.4
7	65.8
8	75.2
9	84.6

24°

566	
1	56.6
2	113.2
3	169.8
4	226.4
5	283.0
6	339.6
7	396.2
8	452.8
9	509.4

565	
1	56.5
2	113.0
3	169.5
4	226.0
5	282.5
6	339.0
7	395.5
8	452.0
9	508.5

564	
1	56.4
2	112.8
3	169.2
4	225.6
5	282.0
6	338.4
7	394.8
8	451.2
9	507.6

473	
1	47.3
2	94.6
3	141.9
4	189.2
5	236.5
6	283.8
7	331.1
8	378.4
9	425.7

471	
1	47.1
2	94.2
3	141.3
4	188.4
5	235.5
6	282.6
7	329.7
8	376.8
9	423.9

94	
1	9.4
2	18.8
3	28.2
4	37.6
5	47.0
6	56.4
7	65.8
8	75.2
9	84.6

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.609 3133	473	9.648 5831	567	0.351 4169	9.960 7302	94	0	60
	10	9.609 3606	473	9.648 6398	567	0.351 3602	9.960 7208	94	50	
	20	9.609 4079	472	9.648 6965	566	0.351 3035	9.960 7114	94	40	
	30	9.609 4551	473	9.648 7531	567	0.351 2469	9.960 7020	93	30	
	40	9.609 5024	473	9.648 8098	566	0.351 1902	9.960 6927	94	20	
	50	9.609 5497	472	9.648 8664	566	0.351 1336	9.960 6833	94	10	
1	0	9.609 5969	473	9.648 9230	567	0.351 0770	9.960 6739	94	0	59
	10	9.609 6442	472	9.648 9797	566	0.351 0203	9.960 6645	94	50	
	20	9.609 6914	473	9.649 0363	566	0.350 9637	9.960 6551	94	40	
	30	9.609 7387	472	9.649 0929	566	0.350 9071	9.960 6457	93	30	
	40	9.609 7859	472	9.649 1495	567	0.350 8505	9.960 6364	94	20	
	50	9.609 8331	472	9.649 2062	566	0.350 7938	9.960 6270	94	10	
2	0	9.609 8803	473	9.649 2628	566	0.350 7372	9.960 6176	94	0	58
	10	9.609 9276	472	9.649 3194	566	0.350 6806	9.960 6082	94	50	
	20	9.609 9748	472	9.649 3760	566	0.350 6240	9.960 5988	94	40	
	30	9.610 0220	472	9.649 4326	565	0.350 5674	9.960 5894	94	30	
	40	9.610 0692	472	9.649 4891	566	0.350 5109	9.960 5800	94	20	
	50	9.610 1164	471	9.649 5457	566	0.350 4543	9.960 5706	94	10	
3	0	9.610 1635	472	9.649 6023	566	0.350 3977	9.960 5612	94	0	57
	10	9.610 2107	472	9.649 6589	566	0.350 3411	9.960 5518	94	50	
	20	9.610 2579	471	9.649 7155	565	0.350 2845	9.960 5424	94	40	
	30	9.610 3050	472	9.649 7720	566	0.350 2280	9.960 5330	94	30	
	40	9.610 3522	472	9.649 8286	565	0.350 1714	9.960 5236	94	20	
	50	9.610 3994	471	9.649 8851	566	0.350 1149	9.960 5142	94	10	
4	0	9.610 4465	471	9.649 9417	565	0.350 0583	9.960 5048	94	0	56
	10	9.610 4936	472	9.649 9982	566	0.350 0018	9.960 4954	94	50	
	20	9.610 5408	471	9.650 0548	565	0.349 9452	9.960 4860	94	40	
	30	9.610 5879	471	9.650 1113	565	0.349 8887	9.960 4766	94	30	
	40	9.610 6350	471	9.650 1678	566	0.349 8322	9.960 4672	94	20	
	50	9.610 6821	472	9.650 2244	565	0.349 7756	9.960 4578	94	10	
5	0	9.610 7293	471	9.650 2809	565	0.349 7191	9.960 4484	94	0	55
	10	9.610 7764	471	9.650 3374	565	0.349 6626	9.960 4390	94	50	
	20	9.610 8235	470	9.650 3939	565	0.349 6061	9.960 4296	95	40	
	30	9.610 8705	471	9.650 4504	565	0.349 5496	9.960 4201	94	30	
	40	9.610 9176	471	9.650 5069	565	0.349 4931	9.960 4107	94	20	
	50	9.610 9647	471	9.650 5634	565	0.349 4366	9.960 4013	94	10	
6	0	9.611 0118	470	9.650 6199	565	0.349 3801	9.960 3919	94	0	54
	10	9.611 0588	471	9.650 6764	565	0.349 3236	9.960 3825	94	50	
	20	9.611 1059	471	9.650 7329	564	0.349 2671	9.960 3731	95	40	
	30	9.611 1530	470	9.650 7893	565	0.349 2107	9.960 3636	94	30	
	40	9.611 2000	470	9.650 8458	565	0.349 1542	9.960 3542	94	20	
	50	9.611 2470	471	9.650 9023	564	0.349 0977	9.960 3448	94	10	
7	0	9.611 2941	470	9.650 9587	565	0.349 0413	9.960 3354	95	0	53
	10	9.611 3411	470	9.651 0152	564	0.348 9848	9.960 3259	94	50	
	20	9.611 3881	471	9.651 0716	565	0.348 9284	9.960 3165	94	40	
	30	9.611 4352	470	9.651 1281	564	0.348 8719	9.960 3071	95	30	
	40	9.611 4822	470	9.651 1845	565	0.348 8155	9.960 2976	94	20	
	50	9.611 5292	470	9.651 2410	564	0.348 7590	9.960 2882	94	10	
8	0	9.611 5762	470	9.651 2974	564	0.348 7026	9.960 2788	95	0	52
	10	9.611 6232	470	9.651 3538	564	0.348 6462	9.960 2693	94	50	
	20	9.611 6702	469	9.651 4102	565	0.348 5898	9.960 2599	94	40	
	30	9.611 7171	470	9.651 4667	564	0.348 5333	9.960 2505	95	30	
	40	9.611 7641	470	9.651 5231	564	0.348 4769	9.960 2410	94	20	
	50	9.611 8111	469	9.651 5795	564	0.348 4205	9.960 2316	94	10	
9	0	9.611 8580	470	9.651 6359	564	0.348 3641	9.960 2222	95	0	51
	10	9.611 9050	469	9.651 6923	564	0.348 3077	9.960 2127	94	50	
	20	9.611 9519	470	9.651 7487	564	0.348 2513	9.960 2033	95	40	
	30	9.611 9989	469	9.651 8051	563	0.348 1949	9.960 1938	94	30	
	40	9.612 0458	470	9.651 8614	564	0.348 1386	9.960 1844	95	20	
	50	9.612 0928	469	9.651 9178	564	0.348 0822	9.960 1749	94	10	
10	0	9.612 1397		9.651 9742		0.348 0258	9.960 1655		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.612 1397	469	9.651 9742	564	0.348 0258	9.960 1655	95	0	50
	10	9.612 1866	469	9.652 0306	563	0.347 9694	9.960 1560	94	50	
	20	9.612 2335	469	9.652 0869	564	0.347 9131	9.960 1466	95	40	
	30	9.612 2804	469	9.652 1433	563	0.347 8567	9.960 1371	94	30	
	40	9.612 3273	469	9.652 1996	564	0.347 8004	9.960 1277	95	20	
	50	9.612 3742	469	9.652 2560	563	0.347 7440	9.960 1182	94	10	
11	0	9.612 4211	469	9.652 3123	564	0.347 6877	9.960 1088	95	0	49
	10	9.612 4680	469	9.652 3687	563	0.347 6313	9.960 0993	94	50	
	20	9.612 5149	468	9.652 4250	563	0.347 5750	9.960 0899	95	40	
	30	9.612 5617	469	9.652 4813	564	0.347 5187	9.960 0804	94	30	
	40	9.612 6086	469	9.652 5377	563	0.347 4623	9.960 0710	95	20	
	50	9.612 6555	468	9.652 5940	563	0.347 4060	9.960 0615	95	10	
12	0	9.612 7023	469	9.652 6503	563	0.347 3497	9.960 0520	94	0	48
	10	9.612 7492	468	9.652 7066	563	0.347 2934	9.960 0426	95	50	
	20	9.612 7960	468	9.652 7629	563	0.347 2371	9.960 0331	95	40	
	30	9.612 8428	469	9.652 8192	563	0.347 1808	9.960 0236	94	30	
	40	9.612 8897	468	9.652 8755	563	0.347 1245	9.960 0142	95	20	
	50	9.612 9365	468	9.652 9318	563	0.347 0682	9.960 0047	95	10	
13	0	9.612 9833	468	9.652 9881	563	0.347 0119	9.959 9952	94	0	47
	10	9.613 0301	468	9.653 0444	562	0.346 9556	9.959 9858	95	50	
	20	9.613 0769	468	9.653 1006	563	0.346 8994	9.959 9763	95	40	
	30	9.613 1237	468	9.653 1569	563	0.346 8431	9.959 9668	95	30	
	40	9.613 1705	468	9.653 2132	562	0.346 7868	9.959 9573	94	20	
	50	9.613 2173	468	9.653 2694	563	0.346 7306	9.959 9479	95	10	
14	0	9.613 2641	468	9.653 3257	562	0.346 6743	9.959 9384	95	0	46
	10	9.613 3109	467	9.653 3819	563	0.346 6181	9.959 9289	95	50	
	20	9.613 3576	468	9.653 4382	562	0.346 5618	9.959 9194	94	40	
	30	9.613 4044	467	9.653 4944	563	0.346 5056	9.959 9100	95	30	
	40	9.613 4511	468	9.653 5507	562	0.346 4493	9.959 9005	95	20	
	50	9.613 4979	467	9.653 6069	562	0.346 3931	9.959 8910	95	10	
15	0	9.613 5446	468	9.653 6631	563	0.346 3369	9.959 8815	95	0	45
	10	9.613 5914	467	9.653 7194	562	0.346 2806	9.959 8720	95	50	
	20	9.613 6381	467	9.653 7756	562	0.346 2244	9.959 8625	95	40	
	30	9.613 6848	468	9.653 8318	562	0.346 1682	9.959 8530	94	30	
	40	9.613 7316	467	9.653 8880	562	0.346 1120	9.959 8436	95	20	
	50	9.613 7783	467	9.653 9442	562	0.346 0558	9.959 8341	95	10	
16	0	9.613 8250	467	9.654 0004	562	0.345 9996	9.959 8246	95	0	44
	10	9.613 8717	467	9.654 0566	562	0.345 9434	9.959 8151	95	50	
	20	9.613 9184	467	9.654 1128	562	0.345 8872	9.959 8056	95	40	
	30	9.613 9651	466	9.654 1690	561	0.345 8310	9.959 7961	95	30	
	40	9.614 0117	467	9.654 2251	562	0.345 7749	9.959 7866	95	20	
	50	9.614 0584	467	9.654 2813	562	0.345 7187	9.959 7771	95	10	
17	0	9.614 1051	467	9.654 3375	562	0.345 6625	9.959 7676	95	0	43
	10	9.614 1518	466	9.654 3937	561	0.345 6063	9.959 7581	95	50	
	20	9.614 1984	467	9.654 4498	562	0.345 5502	9.959 7486	95	40	
	30	9.614 2451	466	9.654 5060	561	0.345 4940	9.959 7391	95	30	
	40	9.614 2917	467	9.654 5621	562	0.345 4379	9.959 7296	95	20	
	50	9.614 3384	466	9.654 6183	561	0.345 3817	9.959 7201	95	10	
18	0	9.614 3850	466	9.654 6744	561	0.345 3256	9.959 7106	95	0	42
	10	9.614 4316	466	9.654 7305	562	0.345 2695	9.959 7011	95	50	
	20	9.614 4782	467	9.654 7867	561	0.345 2133	9.959 6916	95	40	
	30	9.614 5249	466	9.654 8428	561	0.345 1572	9.959 6821	96	30	
	40	9.614 5715	466	9.654 8989	561	0.345 1011	9.959 6725	95	20	
	50	9.614 6181	466	9.654 9550	562	0.345 0450	9.959 6630	95	10	
19	0	9.614 6647	466	9.655 0112	561	0.344 9888	9.959 6535	95	0	41
	10	9.614 7113	466	9.655 0673	561	0.344 9327	9.959 6440	95	50	
	20	9.614 7579	465	9.655 1234	561	0.344 8766	9.959 6345	95	40	
	30	9.614 8044	466	9.655 1795	561	0.344 8205	9.959 6250	95	30	
	40	9.614 8510	466	9.655 2356	560	0.344 7644	9.959 6155	96	20	
	50	9.614 8976	465	9.655 2916	561	0.344 7084	9.959 6059	95	10	
20	0	9.614 9441		9.655 3477		0.344 6523	9.959 5964		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

563	
1	56.3
2	112.6
3	168.9
4	225.2
5	281.5
6	337.8
7	394.1
8	450.4
9	506.7

561	
1	56.1
2	112.2
3	168.3
4	224.4
5	280.5
6	336.6
7	392.7
8	448.8
9	504.9

469	
1	46.9
2	93.8
3	140.7
4	187.6
5	234.5
6	281.4
7	328.3
8	375.2
9	422.1

467	
1	46.7
2	93.4
3	140.1
4	186.8
5	233.5
6	280.2
7	326.9
8	373.6
9	420.3

466	
1	46.6
2	93.2
3	139.8
4	186.4
5	233.0
6	279.6
7	326.2
8	372.8
9	419.4

95	
1	9.5
2	19.0
3	28.5
4	38.0
5	47.5
6	57.0
7	66.5
8	76.0
9	85.5

24°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.614 9441	466	9.655 3477	561	0.344 6523	9.959 5964	95	0	40
	10	9.614 9907	466	9.655 4038	561	0.344 5962	9.959 5869	95	50	
	20	9.615 0373	465	9.655 4599	561	0.344 5401	9.959 5774	96	40	
	30	9.615 0838	465	9.655 5160	560	0.344 4840	9.959 5678	95	30	
	40	9.615 1303	466	9.655 5720	561	0.344 4280	9.959 5583	95	20	
	50	9.615 1769	465	9.655 6281	560	0.344 3719	9.959 5488	95	10	
21	0	9.615 2234	465	9.655 6841	561	0.344 3159	9.959 5393	96	0	39
	10	9.615 2699	465	9.655 7402	560	0.344 2598	9.959 5297	95	50	
	20	9.615 3164	465	9.655 7962	561	0.344 2038	9.959 5202	95	40	
	30	9.615 3629	465	9.655 8523	560	0.344 1477	9.959 5107	96	30	
	40	9.615 4094	465	9.655 9083	560	0.344 0917	9.959 5011	95	20	
	50	9.615 4559	465	9.655 9643	561	0.344 0357	9.959 4916	95	10	
22	0	9.615 5024	465	9.656 0204	560	0.343 9796	9.959 4821	96	0	38
	10	9.615 5489	465	9.656 0764	560	0.343 9236	9.959 4725	95	50	
	20	9.615 5954	465	9.656 1324	560	0.343 8676	9.959 4630	95	40	
	30	9.615 6419	464	9.656 1884	560	0.343 8116	9.959 4535	96	30	
	40	9.615 6883	465	9.656 2444	560	0.343 7556	9.959 4439	95	20	
	50	9.615 7348	464	9.656 3004	560	0.343 6996	9.959 4344	96	10	
23	0	9.615 7812	465	9.656 3564	560	0.343 6436	9.959 4248	95	0	37
	10	9.615 8277	464	9.656 4124	560	0.343 5876	9.959 4153	96	50	
	20	9.615 8741	465	9.656 4684	560	0.343 5316	9.959 4057	95	40	
	30	9.615 9206	464	9.656 5244	560	0.343 4756	9.959 3962	96	30	
	40	9.615 9670	464	9.656 5804	559	0.343 4196	9.959 3866	95	20	
	50	9.616 0134	465	9.656 6363	560	0.343 3637	9.959 3771	96	10	
24	0	9.616 0599	464	9.656 6923	560	0.343 3077	9.959 3675	95	0	36
	10	9.616 1063	464	9.656 7483	559	0.343 2517	9.959 3580	96	50	
	20	9.616 1527	464	9.656 8042	560	0.343 1958	9.959 3484	95	40	
	30	9.616 1991	464	9.656 8602	559	0.343 1398	9.959 3389	96	30	
	40	9.616 2455	464	9.656 9161	560	0.343 0839	9.959 3293	95	20	
	50	9.616 2919	463	9.656 9721	559	0.343 0279	9.959 3198	96	10	
25	0	9.616 3382	464	9.657 0280	560	0.342 9720	9.959 3102	95	0	35
	10	9.616 3846	464	9.657 0840	559	0.342 9160	9.959 3007	96	50	
	20	9.616 4310	464	9.657 1399	559	0.342 8601	9.959 2911	96	40	
	30	9.616 4774	463	9.657 1958	559	0.342 8042	9.959 2815	95	30	
	40	9.616 5237	464	9.657 2517	560	0.342 7483	9.959 2720	96	20	
	50	9.616 5701	463	9.657 3077	559	0.342 6923	9.959 2624	96	10	
26	0	9.616 6164	464	9.657 3636	559	0.342 6364	9.959 2528	95	0	34
	10	9.616 6628	463	9.657 4195	559	0.342 5805	9.959 2433	96	50	
	20	9.616 7091	463	9.657 4754	559	0.342 5246	9.959 2337	96	40	
	30	9.616 7554	463	9.657 5313	559	0.342 4687	9.959 2241	95	30	
	40	9.616 8017	464	9.657 5872	559	0.342 4128	9.959 2146	96	20	
	50	9.616 8481	463	9.657 6431	558	0.342 3569	9.959 2050	96	10	
27	0	9.616 8944	463	9.657 6989	559	0.342 3011	9.959 1954	95	0	33
	10	9.616 9407	463	9.657 7548	559	0.342 2452	9.959 1859	96	50	
	20	9.616 9870	463	9.657 8107	559	0.342 1893	9.959 1763	96	40	
	30	9.617 0333	463	9.657 8666	558	0.342 1334	9.959 1667	96	30	
	40	9.617 0796	462	9.657 9224	559	0.342 0776	9.959 1571	96	20	
	50	9.617 1258	463	9.657 9783	558	0.342 0217	9.959 1475	95	10	
28	0	9.617 1721	463	9.658 0341	559	0.341 9659	9.959 1380	96	0	32
	10	9.617 2184	462	9.658 0900	558	0.341 9100	9.959 1284	96	50	
	20	9.617 2646	463	9.658 1458	559	0.341 8542	9.959 1188	96	40	
	30	9.617 3109	463	9.658 2017	558	0.341 7983	9.959 1092	96	30	
	40	9.617 3572	462	9.658 2575	559	0.341 7425	9.959 0996	96	20	
	50	9.617 4034	462	9.658 3134	558	0.341 6866	9.959 0900	95	10	
29	0	9.617 4496	463	9.658 3692	558	0.341 6308	9.959 0805	96	0	31
	10	9.617 4959	462	9.658 4250	558	0.341 5750	9.959 0709	96	50	
	20	9.617 5421	462	9.658 4808	558	0.341 5192	9.959 0613	96	40	
	30	9.617 5883	462	9.658 5366	558	0.341 4634	9.959 0517	96	30	
	40	9.617 6345	463	9.658 5924	559	0.341 4076	9.959 0421	96	20	
	50	9.617 6808	462	9.658 6483	558	0.341 3517	9.959 0325	96	10	
30	0	9.617 7270		9.658 7041		0.341 2959	9.959 0229		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

65°

	561
1	56.1
2	112.2
3	168.3
4	224.4
5	280.5
6	336.6
7	392.7
8	448.8
9	504.9

	559
1	55.9
2	111.8
3	167.7
4	223.6
5	279.5
6	335.4
7	391.3
8	447.2
9	503.1

	558
1	55.8
2	111.6
3	167.4
4	223.2
5	279.0
6	334.8
7	390.6
8	446.4
9	502.2

	465
1	46.5
2	93.0
3	139.5
4	186.0
5	232.5
6	279.0
7	325.5
8	372.0
9	418.5

	463
1	46.3
2	92.6
3	138.9
4	185.2
5	231.5
6	277.8
7	324.1
8	370.4
9	416.7

	96
1	9.6
2	19.2
3	28.8
4	38.4
5	48.0
6	57.6
7	67.2
8	76.8
9	86.4

24°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.617 7270	462	9.658 7041	557	0.341 2959	9.959 0229	96	0	30
	10	9.617 7732	461	9.658 7598	558	0.341 2402	9.959 0133	96	50	
	20	9.617 8193	462	9.658 8156	558	0.341 1844	9.959 0037	96	40	
	30	9.617 8655	462	9.658 8714	558	0.341 1286	9.958 9941	96	30	
	40	9.617 9117	462	9.658 9272	558	0.341 0728	9.958 9845	96	20	
	50	9.617 9579	462	9.658 9830	557	0.341 0170	9.958 9749	96	10	
31	0	9.618 0041	461	9.659 0387	558	0.340 9613	9.958 9653	96	0	29
	10	9.618 0502	462	9.659 0945	558	0.340 9055	9.958 9557	96	50	
	20	9.618 0964	461	9.659 1503	557	0.340 8497	9.958 9461	96	40	
	30	9.618 1425	462	9.659 2060	558	0.340 7940	9.958 9365	96	30	
	40	9.618 1887	461	9.659 2618	557	0.340 7382	9.958 9269	96	20	
	50	9.618 2348	461	9.659 3175	558	0.340 6825	9.958 9173	96	10	
32	0	9.618 2809	462	9.659 3733	557	0.340 6267	9.958 9077	96	0	28
	10	9.618 3271	461	9.659 4290	557	0.340 5710	9.958 8981	96	50	
	20	9.618 3732	461	9.659 4847	558	0.340 5153	9.958 8885	97	40	
	30	9.618 4193	461	9.659 5405	557	0.340 4595	9.958 8788	96	30	
	40	9.618 4654	461	9.659 5962	557	0.340 4038	9.958 8692	96	20	
	50	9.618 5115	461	9.659 6519	557	0.340 3481	9.958 8596	96	10	
33	0	9.618 5576	461	9.659 7076	557	0.340 2924	9.958 8500	96	0	27
	10	9.618 6037	461	9.659 7633	557	0.340 2367	9.958 8404	96	50	
	20	9.618 6498	461	9.659 8190	557	0.340 1810	9.958 8308	97	40	
	30	9.618 6959	461	9.659 8747	557	0.340 1253	9.958 8211	96	30	
	40	9.618 7420	460	9.659 9304	557	0.340 0696	9.958 8115	96	20	
	50	9.618 7880	461	9.659 9861	557	0.340 0139	9.958 8019	96	10	
34	0	9.618 8341	460	9.660 0418	557	0.339 9582	9.958 7923	97	0	26
	10	9.618 8801	461	9.660 0975	557	0.339 9025	9.958 7826	96	50	
	20	9.618 9262	460	9.660 1532	557	0.339 8468	9.958 7730	96	40	
	30	9.618 9722	461	9.660 2089	556	0.339 7911	9.958 7634	96	30	
	40	9.619 0183	460	9.660 2645	557	0.339 7355	9.958 7538	97	20	
	50	9.619 0643	460	9.660 3202	556	0.339 6798	9.958 7441	96	10	
35	0	9.619 1103	461	9.660 3758	557	0.339 6242	9.958 7345	96	0	25
	10	9.619 1564	460	9.660 4315	556	0.339 5685	9.958 7249	97	50	
	20	9.619 2024	460	9.660 4871	557	0.339 5129	9.958 7152	96	40	
	30	9.619 2484	460	9.660 5428	556	0.339 4572	9.958 7056	96	30	
	40	9.619 2944	460	9.660 5984	557	0.339 4016	9.958 6960	97	20	
	50	9.619 3404	460	9.660 6541	556	0.339 3459	9.958 6863	96	10	
36	0	9.619 3864	460	9.660 7097	556	0.339 2903	9.958 6767	97	0	24
	10	9.619 4324	459	9.660 7653	556	0.339 2347	9.958 6670	96	50	
	20	9.619 4783	460	9.660 8209	557	0.339 1791	9.958 6574	97	40	
	30	9.619 5243	460	9.660 8766	556	0.339 1234	9.958 6477	96	30	
	40	9.619 5703	459	9.660 9322	556	0.339 0678	9.958 6381	96	20	
	50	9.619 6162	460	9.660 9878	556	0.339 0122	9.958 6285	97	10	
37	0	9.619 6622	459	9.661 0434	556	0.338 9566	9.958 6188	96	0	23
	10	9.619 7081	460	9.661 0990	556	0.338 9010	9.958 6092	97	50	
	20	9.619 7541	459	9.661 1546	556	0.338 8454	9.958 5995	96	40	
	30	9.619 8000	460	9.661 2102	555	0.338 7898	9.958 5899	97	30	
	40	9.619 8460	459	9.661 2657	556	0.338 7343	9.958 5802	96	20	
	50	9.619 8919	459	9.661 3213	556	0.338 6787	9.958 5706	97	10	
38	0	9.619 9378	459	9.661 3769	556	0.338 6231	9.958 5609	96	0	22
	10	9.619 9837	459	9.661 4325	555	0.338 5675	9.958 5513	97	50	
	20	9.620 0296	459	9.661 4880	556	0.338 5120	9.958 5416	97	40	
	30	9.620 0755	459	9.661 5436	556	0.338 4564	9.958 5319	96	30	
	40	9.620 1214	459	9.661 5992	555	0.338 4008	9.958 5223	97	20	
	50	9.620 1673	459	9.661 6547	556	0.338 3453	9.958 5126	96	10	
39	0	9.620 2132	459	9.661 7103	555	0.338 2897	9.958 5030	97	0	21
	10	9.620 2591	459	9.661 7658	555	0.338 2342	9.958 4933	97	50	
	20	9.620 3050	458	9.661 8213	556	0.338 1787	9.958 4836	96	40	
	30	9.620 3508	459	9.661 8769	555	0.338 1231	9.958 4740	97	30	
	40	9.620 3967	459	9.661 9324	555	0.338 0676	9.958 4643	97	20	
	50	9.620 4426	458	9.661 9879	555	0.338 0121	9.958 4546	96	10	
40	0	9.620 4884		9.662 0434		0.337 9566	9.958 4450		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

65°

	557
1	55.7
2	111.4
3	167.1
4	222.8
5	278.5
6	334.2
7	389.9
8	445.6
9	501.3

	556
1	55.6
2	111.2
3	166.8
4	222.4
5	278.0
6	333.6
7	389.2
8	444.8
9	500.4

	462
1	46.2
2	92.4
3	138.6
4	184.8
5	231.0
6	277.2
7	323.4
8	369.6
9	415.8

	461
1	46.1
2	92.2
3	138.3
4	184.4
5	230.5
6	276.6
7	322.7
8	368.8
9	414.9

	459
1	45.9
2	91.8
3	137.7
4	183.6
5	229.5
6	275.4
7	321.3
8	367.2
9	413.1

	97
1	9.7
2	19.4
3	29.1
4	38.8
5	48.5
6	58.2
7	67.9
8	77.6
9	87.3

555	
1	55.5
2	111.0
3	166.5
4	222.0
5	277.5
6	333.0
7	388.5
8	444.0
9	499.5

554	
1	55.4
2	110.8
3	166.2
4	221.6
5	277.0
6	332.4
7	387.8
8	443.2
9	498.6

553	
1	55.3
2	110.6
3	165.9
4	221.2
5	276.5
6	331.8
7	387.1
8	442.4
9	497.7

458	
1	45.8
2	91.6
3	137.4
4	183.2
5	229.0
6	274.8
7	320.6
8	366.4
9	412.2

456	
1	45.6
2	91.2
3	136.8
4	182.4
5	228.0
6	273.6
7	319.2
8	364.8
9	410.4

97	
1	9.7
2	19.4
3	29.1
4	38.8
5	48.5
6	58.2
7	67.9
8	77.6
9	87.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.620 4884	458	9.662 0434	556	0.337 9566	9.958 4450	97	0	20
	10	9.620 5342	459	9.662 0990	555	0.337 9010	9.958 4353	97	50	
	20	9.620 5801	458	9.662 1545	555	0.337 8455	9.958 4256	97	40	
	30	9.620 6259	458	9.662 2100	555	0.337 7900	9.958 4159	96	30	
	40	9.620 6717	459	9.662 2655	555	0.337 7345	9.958 4063	97	20	
	50	9.620 7176	458	9.662 3210	555	0.337 6790	9.958 3966	97	10	
41	0	9.620 7634	458	9.662 3765	554	0.337 6235	9.958 3869	97	0	19
	10	9.620 8092	458	9.662 4319	555	0.337 5681	9.958 3772	96	50	
	20	9.620 8550	458	9.662 4874	555	0.337 5126	9.958 3676	97	40	
	30	9.620 9008	458	9.662 5429	555	0.337 4571	9.958 3579	97	30	
	40	9.620 9466	458	9.662 5984	554	0.337 4016	9.958 3482	97	20	
	50	9.620 9924	458	9.662 6538	555	0.337 3462	9.958 3385	97	10	
42	0	9.621 0382	457	9.662 7093	555	0.337 2907	9.958 3288	96	0	18
	10	9.621 0839	458	9.662 7648	554	0.337 2352	9.958 3192	97	50	
	20	9.621 1297	458	9.662 8202	555	0.337 1798	9.958 3095	97	40	
	30	9.621 1755	457	9.662 8757	554	0.337 1243	9.958 2998	97	30	
	40	9.621 2212	458	9.662 9311	555	0.337 0689	9.958 2901	97	20	
	50	9.621 2670	457	9.662 9866	554	0.337 0134	9.958 2804	97	10	
43	0	9.621 3127	457	9.663 0420	554	0.336 9580	9.958 2707	97	0	17
	10	9.621 3584	458	9.663 0974	555	0.336 9026	9.958 2610	97	50	
	20	9.621 4042	457	9.663 1529	554	0.336 8471	9.958 2513	97	40	
	30	9.621 4499	457	9.663 2083	554	0.336 7917	9.958 2416	97	30	
	40	9.621 4956	457	9.663 2637	554	0.336 7363	9.958 2319	97	20	
	50	9.621 5413	458	9.663 3191	554	0.336 6809	9.958 2222	97	10	
44	0	9.621 5871	457	9.663 3745	554	0.336 6255	9.958 2125	97	0	16
	10	9.621 6328	457	9.663 4299	554	0.336 5701	9.958 2028	97	50	
	20	9.621 6785	457	9.663 4853	554	0.336 5147	9.958 1931	97	40	
	30	9.621 7242	456	9.663 5407	554	0.336 4593	9.958 1834	97	30	
	40	9.621 7698	457	9.663 5961	554	0.336 4039	9.958 1737	97	20	
	50	9.621 8155	457	9.663 6515	554	0.336 3485	9.958 1640	97	10	
45	0	9.621 8612	457	9.663 7069	554	0.336 2931	9.958 1543	97	0	15
	10	9.621 9069	456	9.663 7623	553	0.336 2377	9.958 1446	97	50	
	20	9.621 9525	457	9.663 8176	554	0.336 1824	9.958 1349	97	40	
	30	9.621 9982	456	9.663 8730	554	0.336 1270	9.958 1252	97	30	
	40	9.622 0438	457	9.663 9284	553	0.336 0716	9.958 1155	97	20	
	50	9.622 0895	456	9.663 9837	554	0.336 0163	9.958 1058	97	10	
46	0	9.622 1351	457	9.664 0391	553	0.335 9609	9.958 0961	98	0	14
	10	9.622 1808	456	9.664 0944	554	0.335 9056	9.958 0863	97	50	
	20	9.622 2264	456	9.664 1498	553	0.335 8502	9.958 0766	97	40	
	30	9.622 2720	456	9.664 2051	553	0.335 7949	9.958 0669	97	30	
	40	9.622 3176	456	9.664 2604	554	0.335 7396	9.958 0572	97	20	
	50	9.622 3632	456	9.664 3158	553	0.335 6842	9.958 0475	97	10	
47	0	9.622 4088	456	9.664 3711	553	0.335 6289	9.958 0378	98	0	13
	10	9.622 4544	456	9.664 4264	553	0.335 5736	9.958 0280	97	50	
	20	9.622 5000	456	9.664 4817	553	0.335 5183	9.958 0183	97	40	
	30	9.622 5456	456	9.664 5370	553	0.335 4630	9.958 0086	97	30	
	40	9.622 5912	456	9.664 5923	554	0.335 4077	9.957 9989	98	20	
	50	9.622 6368	456	9.664 6477	553	0.335 3523	9.957 9891	97	10	
48	0	9.622 6824	455	9.664 7030	552	0.335 2970	9.957 9794	97	0	12
	10	9.622 7279	456	9.664 7582	553	0.335 2418	9.957 9697	98	50	
	20	9.622 7735	455	9.664 8135	553	0.335 1865	9.957 9599	97	40	
	30	9.622 8190	456	9.664 8688	553	0.335 1312	9.957 9502	97	30	
	40	9.622 8646	455	9.664 9241	553	0.335 0759	9.957 9405	98	20	
	50	9.622 9101	456	9.664 9794	552	0.335 0206	9.957 9307	97	10	
49	0	9.622 9557	455	9.665 0346	553	0.334 9654	9.957 9210	97	0	11
	10	9.623 0012	455	9.665 0899	553	0.334 9101	9.957 9113	98	50	
	20	9.623 0467	455	9.665 1452	552	0 334 8548	9.957 9015	97	40	
	30	9.623 0922	455	9.665 2004	553	0.334 7996	9.957 8918	97	30	
	40	9.623 1377	455	9.665 2557	552	0.334 7443	9.957 8821	98	20	
	50	9.623 1832	455	9.665 3109	553	0.334 6891	9.957 8723	97	10	
50	0	9.623 2287		9.665 3662		0.334 6338	9.957 8626		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.623 2287	455	9.665 3662	552	0.334 6338	9.957 8626	98	0	10
	10	9.623 2742	455	9.665 4214	553	0.334 5786	9.957 8528	97	50	
	20	9.623 3197	455	9.665 4767	552	0.334 5233	9.957 8431	98	40	
	30	9.623 3652	455	9.665 5319	552	0.334 4681	9.957 8333	97	30	
	40	9.623 4107	455	9.665 5871	552	0.334 4129	9.957 8236	98	20	
	50	9.623 4562	454	9.665 6423	552	0.334 3577	9.957 8138	97	10	
51	0	9.623 5016	455	9.665 6975	553	0.334 3025	9.957 8041	98	0	9
	10	9.623 5471	454	9.665 7528	552	0.334 2472	9.957 7943	97	50	
	20	9.623 5925	455	9.665 8080	552	0.334 1920	9.957 7846	98	40	
	30	9.623 6380	454	9.665 8632	552	0.334 1368	9.957 7748	97	30	
	40	9.623 6834	455	9.665 9184	552	0.334 0816	9.957 7651	98	20	
	50	9.623 7289	454	9.665 9736	552	0.334 0264	9.957 7553	97	10	
52	0	9.623 7743	454	9.666 0288	551	0.333 9712	9.957 7456	98	0	8
	10	9.623 8197	455	9.666 0839	552	0.333 9161	9.957 7358	98	50	
	20	9.623 8652	454	9.666 1391	552	0.333 8609	9.957 7260	97	40	
	30	9.623 9106	454	9.666 1943	552	0.333 8057	9.957 7163	98	30	
	40	9.623 9560	454	9.666 2495	551	0.333 7505	9.957 7065	98	20	
	50	9.624 0014	454	9.666 3046	552	0.333 6954	9.957 6967	97	10	
53	0	9.624 0468	454	9.666 3598	552	0.333 6402	9.957 6870	98	0	7
	10	9.624 0922	454	9.666 4150	551	0.333 5850	9.957 6772	98	50	
	20	9.624 1376	453	9.666 4701	552	0.333 5299	9.957 6674	97	40	
	30	9.624 1829	454	9.666 5253	551	0.333 4747	9.957 6577	98	30	
	40	9.624 2283	454	9.666 5804	551	0.333 4196	9.957 6479	98	20	
	50	9.624 2737	453	9.666 6355	552	0.333 3645	9.957 6381	97	10	
54	0	9.624 3190	454	9.666 6907	551	0.333 3093	9.957 6284	98	0	6
	10	9.624 3644	453	9.666 7458	551	0.333 2542	9.957 6186	98	50	
	20	9.624 4097	454	9.666 8009	552	0.333 1991	9.957 6088	98	40	
	30	9.624 4551	453	9.666 8561	551	0.333 1439	9.957 5990	97	30	
	40	9.624 5004	454	9.666 9112	551	0.333 0888	9.957 5893	98	20	
	50	9.624 5458	453	9.666 9663	551	0.333 0337	9.957 5795	98	10	
55	0	9.624 5911	453	9.667 0214	551	0.332 9786	9.957 5697	98	0	5
	10	9.624 6364	453	9.667 0765	551	0.332 9235	9.957 5599	98	50	
	20	9.624 6817	453	9.667 1316	551	0.332 8684	9.957 5501	98	40	
	30	9.624 7270	453	9.667 1867	551	0.332 8133	9.957 5403	97	30	
	40	9.624 7723	453	9.667 2418	551	0.332 7582	9.957 5306	98	20	
	50	9.624 8176	453	9.667 2969	550	0.332 7031	9.957 5208	98	10	
56	0	9.624 8629	453	9.667 3519	551	0.332 6481	9.957 5110	98	0	4
	10	9.624 9082	453	9.667 4070	551	0.332 5930	9.957 5012	98	50	
	20	9.624 9535	453	9.667 4621	551	0.332 5379	9.957 4914	98	40	
	30	9.624 9988	453	9.667 5172	550	0.332 4828	9.957 4816	98	30	
	40	9.625 0441	452	9.667 5722	551	0.332 4278	9.957 4718	98	20	
	50	9.625 0893	453	9.667 6273	550	0.332 3727	9.957 4620	98	10	
57	0	9.625 1346	452	9.667 6823	551	0.332 3177	9.957 4522	98	0	3
	10	9.625 1798	453	9.667 7374	550	0.332 2626	9.957 4424	98	50	
	20	9.625 2251	452	9.667 7924	551	0.332 2076	9.957 4326	98	40	
	30	9.625 2703	453	9.667 8475	550	0.332 1525	9.957 4228	98	30	
	40	9.625 3156	452	9.667 9025	550	0.332 0975	9.957 4130	98	20	
	50	9.625 3608	452	9.667 9575	551	0.332 0425	9.957 4032	98	10	
58	0	9.625 4060	452	9.668 0126	550	0.331 9874	9.957 3934	98	0	2
	10	9.625 4512	452	9.668 0676	550	0.331 9324	9.957 3836	98	50	
	20	9.625 4964	453	9.668 1226	550	0.331 8774	9.957 3738	98	40	
	30	9.625 5417	452	9.668 1776	550	0.331 8224	9.957 3640	98	30	
	40	9.625 5869	451	9.668 2326	550	0.331 7674	9.957 3542	98	20	
	50	9.625 6320	452	9.668 2876	550	0.331 7124	9.957 3444	98	10	
59	0	9.625 6772	452	9.668 3426	550	0.331 6574	9.957 3346	98	0	1
	10	9.625 7224	452	9.668 3976	550	0.331 6024	9.957 3248	98	50	
	20	9.625 7676	452	9.668 4526	550	0.331 5474	9.957 3150	98	40	
	30	9.625 8128	451	9.668 5076	550	0.331 4924	9.957 3052	99	30	
	40	9.625 8579	452	9.668 5626	550	0.331 4374	9.957 2953	98	20	
	50	9.625 9031	452	9.668 6176	549	0.331 3824	9.957 2855	98	10	
60	0	9.625 9483		9.668 6725		0.331 3275	9.957 2757		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	552
1	55.2
2	110.4
3	165.6
4	220.8
5	276.0
6	331.2
7	386.4
8	441.6
9	496.8

	551
1	55.1
2	110.2
3	165.3
4	220.4
5	275.5
6	330.6
7	385.7
8	440.8
9	495.9

	455
1	45.5
2	91.0
3	136.5
4	182.0
5	227.5
6	273.0
7	318.5
8	364.0
9	409.5

	453
1	45.3
2	90.6
3	135.9
4	181.2
5	226.5
6	271.8
7	317.1
8	362.4
9	407.7

	452
1	45.2
2	90.4
3	135.6
4	180.8
5	226.0
6	271.2
7	316.4
8	361.6
9	406.8

	98
1	9.8
2	19.6
3	29.4
4	39.2
5	49.0
6	58.8
7	68.6
8	78.4
9	88.2

25°

549	
1	54.9
2	109.8
3	164.7
4	219.6
5	274.5
6	329.4
7	384.3
8	439.2
9	494.1

548	
1	54.8
2	109.6
3	164.4
4	219.2
5	274.0
6	328.8
7	383.6
8	438.4
9	493.2

547	
1	54.7
2	109.4
3	164.1
4	218.8
5	273.5
6	328.2
7	382.9
8	437 6
9	492.3

451	
1	45.1
2	90.2
3	135.3
4	180.4
5	225.5
6	270.6
7	315.7
8	360.8
9	405.9

449	
1	44.9
2	89.8
3	134.7
4	179.6
5	224.5
6	269.4
7	314.3
8	359.2
9	404.1

98	
1	9.8
2	19.6
3	29.4
4	39.2
5	49.0
6	58.8
7	68.6
8	78.4
9	88.2

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.625 9483	451	9.668 6725	550	0.331 3275	9.957 2757	98	0	60
	10	9.625 9934	452	9.668 7275	550	0.331 2725	9.957 2659	98	50	
	20	9.626 0386	451	9.668 7825	549	0.331 2175	9.957 2561	98	40	
	30	9.626 0837	451	9.668 8374	550	0.331 1626	9.957 2463	99	30	
	40	9.626 1288	452	9.668 8924	549	0.331 1076	9.957 2364	98	20	
	50	9.026 1740	451	9.668 9473	550	0.331 0527	9.957 2266	98	10	
1	0	9.626 2191	451	9.669 0023	549	0.330 9977	9.957 2168	98	0	59
	10	9.626 2642	451	9.669 0572	550	0.330 9428	9.957 2070	99	50	
	20	9.626 3093	451	9.669 1122	549	0.330 8878	9.957 1971	98	40	
	30	9.626 3544	451	9.669 1671	549	0.330 8329	9.957 1873	98	30	
	40	9.626 3995	451	9.669 2220	550	0.330 7780	9.957 1775	99	20	
	50	9.626 4446	451	9.669 2770	549	0.330 7230	9.957 1676	98	10	
2	0	9.626 4897	451	9.669 3319	549	0.330 6681	9.957 1578	98	0	58
	10	9.626 5348	450	9.669 3868	549	0.330 6132	9.957 1480	99	50	
	20	9.626 5798	451	9.669 4417	549	0.330 5583	9.957 1381	98	40	
	30	9.626 6249	451	9.669 4966	549	0.330 5034	9.957 1283	98	30	
	40	9.626 6700	450	9.669 5515	549	0.330 4485	9.957 1185	99	20	
	50	9.626 7150	451	9.669 6064	549	0.330 3936	9.957 1086	98	10	
3	0	9.626 7601	450	9.669 6613	549	0.330 3387	9.957 0988	99	0	57
	10	9.626 8051	451	9.669 7162	549	0.330 2838	9.957 0889	98	50	
	20	9.626 8502	450	9.669 7711	549	0.330 2289	9.957 0791	98	40	
	30	9.626 8952	450	9.669 8260	548	0.330 1740	9.957 0693	99	30	
	40	9.626 9402	451	9.669 8808	549	0.330 1192	9.957 0594	98	20	
	50	9.626 9853	450	9.669 9357	549	0.330 0643	9.957 0496	99	10	
4	0	9.627 0303	450	9.669 9906	548	0.330 0094	9.957 0397	98	0	56
	10	9.627 0753	450	9.670 0454	549	0.329 9546	9.957 0299	99	50	
	20	9.627 1203	450	9.670 1003	548	0.329 8997	9.957 0200	98	40	
	30	9.627 1653	450	9.670 1551	549	0.329 8449	9.957 0102	99	30	
	40	9.627 2103	450	9.670 2100	548	0.329 7900	9.957 0003	98	20	
	50	9.627 2553	450	9.670 2648	549	0.329 7352	9.956 9905	99	10	
5	0	9.627 3003	450	9.670 3197	548	0.329 6803	9.956 9806	99	0	55
	10	9.627 3453	449	9.670 3745	548	0.329 6255	9.956 9707	98	50	
	20	9.627 3902	450	9.670 4293	549	0.329 5707	9.956 9609	99	40	
	30	9.627 4352	450	9.670 4842	548	0.329 5158	9.956 9510	98	30	
	40	9.627 4802	449	9.670 5390	548	0.329 4610	9.956 9412	99	20	
	50	9.627 5251	450	9.670 5938	548	0.329 4062	9.956 9313	98	10	
6	0	9.627 5701	449	9.670 6486	548	0.329 3514	9.956 9215	99	0	54
	10	9.627 6150	450	9.670 7034	548	0.329 2966	9.956 9116	99	50	
	20	9.627 6600	449	9.670 7582	548	0.329 2418	9.956 9017	98	40	
	30	9.627 7049	449	9.670 8130	548	0.329 1870	9.956 8919	99	30	
	40	9.627 7498	449	9.670 8678	548	0.329 1322	9.956 8820	99	20	
	50	9.627 7947	450	9.670 9226	548	0.329 0774	9.956 8721	98	10	
7	0	9.627 8397	449	9.670 9774	548	0.329 0226	9.956 8623	99	0	53
	10	9.627 8846	449	9 671 0322	548	0.328 9678	9.956 8524	99	50	
	20	9.627 9295	449	9.671 0870	547	0.328 9130	9.956 8425	99	40	
	30	9.627 9744	449	9.671 1417	548	0.328 8583	9.956 8326	98	30	
	40	9.628 0193	449	9.671 1965	548	0.328 8035	9.956 8228	99	20	
	50	9.628 0642	448	9.671 2513	547	0.328 7487	9.956 8129	99	10	
8	0	9.628 1090	449	9.671 3060	548	0.328 6940	9.956 8030	99	0	52
	10	9.628 1539	449	9.671 3608	547	0.328 6392	9.956 7931	99	50	
	20	9.628 1988	449	9.671 4155	548	0.328 5845	9.956 7832	98	40	
	30	9.628 2437	448	9.671 4703	547	0.328 5297	9.956 7734	99	30	
	40	9.628 2885	449	9.671 5250	548	0.328 4750	9.956 7635	99	20	
	50	9.628 3334	448	9.671 5798	547	0.328 4202	9.956 7536	99	10	
9	0	9.628 3782	449	9.671 6345	547	0.328 3655	9.956 7437	99	0	51
	10	9.628 4231	448	9.671 6892	548	0.328 3108	9.956 7338	99	50	
	20	9.628 4679	448	9.671 7440	547	0.328 2560	9.956 7239	98	40	
	30	9.628 5127	449	9.671 7987	547	0.328 2013	9.956 7141	99	30	
	40	9.628 5576	448	9.671 8534	547	0.328 1466	9.956 7042	99	20	
	50	9.628 6024	448	9.671 9081	547	0.328 0919	9.956 6943	99	10	
10	0	9.628 6472		9.671 9628		0.328 0372	9.956 6844		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

64°

25°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.628 6472	448	9.671 9628	547	0.328 0372	9.956 6844	99	0	50
	10	9.628 6920	448	9.672 0175	547	0.327 9825	9.956 6745	99	50	
	20	9.628 7368	448	9.672 0722	547	0.327 9278	9.956 6646	99	40	
	30	9.628 7816	448	9.672 1269	547	0.327 8731	9.956 6547	99	30	
	40	9.628 8264	448	9.672 1816	547	0.327 8184	9.956 6448	99	20	
	50	9.628 8712	448	9.672 2363	547	0.327 7637	9.956 6349	99	10	
11	0	9.628 9160	447	9.672 2910	546	0.327 7090	9.956 6250	99	0	49
	10	9.628 9607	448	9.672 3456	547	0.327 6544	9.956 6151	99	50	
	20	9.629 0055	448	9.672 4003	547	0.327 5997	9.956 6052	99	40	
	30	9.629 0503	447	9.672 4550	546	0.327 5450	9.956 5953	99	30	
	40	9.629 0950	448	9.672 5096	547	0.327 4904	9.956 5854	99	20	
	50	9.629 1398	447	9.672 5643	547	0.327 4357	9.956 5755	99	10	
12	0	9.629 1845	448	9.672 6190	546	0.327 3810	9.956 5656	99	0	48
	10	9.629 2293	447	9.672 6736	547	0.327 3264	9.956 5557	99	50	
	20	9.629 2740	447	9.672 7283	546	0.327 2717	9.956 5458	100	40	
	30	9.629 3187	448	9.672 7829	546	0.327 2171	9.956 5358	99	30	
	40	9.629 3635	447	9.672 8375	547	0.327 1625	9.956 5259	99	20	
	50	9.629 4082	447	9.672 8922	546	0.327 1078	9.956 5160	99	10	
13	0	9.629 4529	447	9.672 9468	546	0.327 0532	9.956 5061	99	0	47
	10	9.629 4976	447	9.673 0014	546	0.326 9986	9.956 4962	99	50	
	20	9.629 5423	447	9.673 0560	547	0.326 9440	9.956 4863	99	40	
	30	9.629 5870	447	9.673 1107	546	0.326 8893	9.956 4764	100	30	
	40	9.629 6317	447	9.673 1653	546	0.326 8347	9.956 4664	99	20	
	50	9.629 6764	447	9.673 2199	546	0.326 7801	9.956 4565	99	10	
14	0	9.629 7211	446	9.673 2745	546	0.326 7255	9.956 4466	99	0	46
	10	9.629 7657	447	9.673 3291	546	0.326 6709	9.956 4367	100	50	
	20	9.629 8104	447	9.673 3837	546	0.326 6163	9.956 4267	99	40	
	30	9.629 8551	446	9.673 4383	545	0.326 5617	9.956 4168	99	30	
	40	9.629 8997	447	9.673 4928	546	0.326 5072	9.956 4069	99	20	
	50	9.629 9444	446	9.673 5474	546	0.326 4526	9.956 3970	100	10	
15	0	9.629 9890	447	9.673 6020	546	0.326 3980	9.956 3870	99	0	45
	10	9.630 0337	446	9.673 6566	545	0.326 3434	9.956 3771	99	50	
	20	9.630 0783	446	9.673 7111	546	0.326 2889	9.956 3672	100	40	
	30	9.630 1229	447	9.673 7657	546	0.326 2343	9.956 3572	99	30	
	40	9.630 1676	446	9.673 8203	545	0.326 1797	9.956 3473	99	20	
	50	9.630 2122	446	9.673 8748	546	0.326 1252	9.956 3374	100	10	
16	0	9.630 2568	446	9.673 9294	545	0.326 0706	9.956 3274	99	0	44
	10	9.630 3014	446	9 673 9839	545	0.326 0161	9.956 3175	99	50	
	20	9.630 3460	446	9.674 0384	546	0.325 9616	9.956 3076	100	40	
	30	9.630 3906	446	9.674 0930	545	0.325 9070	9.956 2976	99	30	
	40	9.630 4352	446	9.674 1475	545	0.325 8525	9.956 2877	100	20	
	50	9.630 4798	445	9.674 2020	546	0.325 7980	9.956 2777	99	10	
17	0	9.630 5243	446	9.674 2566	545	0.325 7434	9.956 2678	100	0	43
	10	9.630 5689	446	9.674 3111	545	0.325 6889	9.956 2578	99	50	
	20	9.630 6135	445	9.674 3656	545	0.325 6344	9.956 2479	100	40	
	30	9.630 6580	446	9.674 4201	545	0.325 5799	9.956 2379	99	30	
	40	9.630 7026	446	9.674 4746	545	0.325 5254	9.956 2280	100	20	
	50	9.630 7472	445	9.674 5291	545	0.325 4709	9.956 2180	99	10	
18	0	9.630 7917	445	9.674 5836	545	0.325 4164	9.956 2081	100	0	42
	10	9.630 8362	446	9.674 6381	545	0.325 3619	9.956 1981	99	50	
	20	9.630 8808	445	9.674 6926	545	0.325 3074	9.956 1882	100	40	
	30	9.630 9253	445	9.674 7471	545	0.325 2529	9.956 1782	99	30	
	40	9.630 9698	445	9.674 8016	544	0.325 1984	9.956 1683	100	20	
	50	9.631 0143	446	9.674 8560	545	0.325 1440	9.956 1583	100	10	
19	0	9.631 0589	445	9.674 9105	545	0.325 0895	9.956 1483	99	0	41
	10	9.631 1034	445	9.674 9650	544	0.325 0350	9.956 1384	100	50	
	20	9.631 1479	445	9.675 0194	545	0.324 9806	9.956 1284	99	40	
	30	9.631 1924	444	9.675 0739	544	0.324 9261	9.956 1185	100	30	
	40	9.631 2368	445	9.675 1283	545	0.324 8717	9.956 1085	100	20	
	50	9.631 2813	445	9.675 1828	544	0.324 8172	9.956 0985	99	10	
20	0	9.631 3258		9.675 2372		0.324 7628	9.956 0886		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

64°

	546
1	54.6
2	109.2
3	163.8
4	218.4
5	273.0
6	327.6
7	382.2
8	436.8
9	491.4

	545
1	54.5
2	109.0
3	163.5
4	218.0
5	272.5
6	327.0
7	381.5
8	436.0
9	490.5

	447
1	44.7
2	89.4
3	134.1
4	178.8
5	223.5
6	268.2
7	312.9
8	357.6
9	402.3

	446
1	44.6
2	89.2
3	133.8
4	178.4
5	223.0
6	267.6
7	312.2
8	356.8
9	401.4

	445
1	44.5
2	89.0
3	133.5
4	178.0
5	222.5
6	267.0
7	311.5
8	356.0
9	400.5

	99
1	9.9
2	19.8
3	29.7
4	39.6
5	49.5
6	59.4
7	69.3
8	79.2
9	89.1

25°

	544
1	54.4
2	108.8
3	163.2
4	217.6
5	272.0
6	326.4
7	380.8
8	435.2
9	489.6

	543
1	54.3
2	108.6
3	162.9
4	217.2
5	271.5
6	325.8
7	380.1
8	434.4
9	488.7

	444
1	44.4
2	88.8
3	133.2
4	177.6
5	222.0
6	266.4
7	310.8
8	355.2
9	399.6

	443
1	44.3
2	88.6
3	132.9
4	177.2
5	221.5
6	265.8
7	310.1
8	354.4
9	398.7

	442
1	44.2
2	88.4
3	132.6
4	176.8
5	221.0
6	265.2
7	309.4
8	353.6
9	397.8

	99
1	9.9
2	19.8
3	29.7
4	39.6
5	49.5
6	59.4
7	69.3
8	79.2
9	89.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.631 3258	445	9.675 2372	545	0.324 7628	9.956 0886	100	0	40
	10	9.631 3703	444	9.675 2917	544	0.324 7083	9.956 0786	100	50	
	20	9.631 4147	445	9.675 3461	545	0.324 6539	9.956 0686	99	40	
	30	9.631 4592	445	9.675 4006	544	0.324 5994	9.956 0587	100	30	
	40	9.631 5037	444	9.675 4550	544	0.324 5450	9.956 0487	100	20	
	50	9.631 5481	445	9.675 5094	544	0.324 4906	9.956 0387	100	10	
21	0	9.631 5926	444	9.675 5638	544	0.324 4362	9.956 0287	99	0	39
	10	9.631 6370	444	9.675 6182	545	0.324 3818	9.956 0188	100	50	
	20	9.631 6814	445	9.675 6727	544	0.324 3273	9.956 0088	100	40	
	30	9.631 7259	444	9.675 7271	544	0.324 2729	9.955 9988	100	30	
	40	9.631 7703	444	9.675 7815	544	0.324 2185	9.955 9888	100	20	
	50	9.631 8147	444	9.675 8359	544	0.324 1641	9.955 9788	99	10	
22	0	9.631 8591	444	9.675 8903	543	0.324 1097	9.955 9689	100	0	38
	10	9.631 9035	444	9.675 9446	544	0.324 0554	9.955 9589	100	50	
	20	9.631 9479	444	9.675 9990	544	0.324 0010	9.955 9489	100	40	
	30	9.631 9923	444	9.676 0534	544	0.323 9466	9.955 9389	100	30	
	40	9.632 0367	444	9.676 1078	544	0.323 8922	9.955 9289	100	20	
	50	9.632 0811	444	9.676 1622	543	0.323 8378	9.955 9189	100	10	
23	0	9.632 1255	443	9.676 2165	544	0.323 7835	9.955 9089	99	0	37
	10	9.632 1698	444	9.676 2709	543	0.323 7291	9.955 8990	100	50	
	20	9.632 2142	444	9.676 3252	544	0.323 6748	9.955 8890	100	40	
	30	9.632 2586	443	9.676 3796	544	0.323 6204	9.955 8790	100	30	
	40	9.632 3029	444	9.676 4340	543	0.323 5660	9.955 8690	100	20	
	50	9.632 3473	443	9.676 4883	543	0.323 5117	9.955 8590	100	10	
24	0	9.632 3916	444	9.676 5426	544	0.323 4574	9.955 8490	100	0	36
	10	9.632 4360	443	9.676 5970	543	0.323 4030	9.955 8390	100	50	
	20	9.632 4803	443	9.676 6513	543	0.323 3487	9.955 8290	100	40	
	30	9.632 5246	443	9.676 7056	544	0.323 2944	9.955 8190	100	30	
	40	9.632 5689	444	9.676 7600	543	0.323 2400	9.955 8090	100	20	
	50	9.632 6133	443	9.676 8143	543	0.323 1857	9.955 7990	100	10	
25	0	9.632 6576	443	9.676 8686	543	0.323 1314	9.955 7890	100	0	35
	10	9.632 7019	443	9.676 9229	543	0.323 0771	9.955 7790	100	50	
	20	9.632 7462	443	9.676 9772	543	0.323 0228	9.955 7690	101	40	
	30	9.632 7905	443	9.677 0315	543	0.322 9685	9.955 7589	100	30	
	40	9.632 8348	442	9.677 0858	543	0.322 9142	9.955 7489	100	20	
	50	9.632 8790	443	9.677 1401	543	0.322 8599	9.955 7389	100	10	
26	0	9.632 9233	443	9.677 1944	543	0.322 8056	9.955 7289	100	0	34
	10	9.632 9676	443	9.677 2487	543	0.322 7513	9.955 7189	100	50	
	20	9.633 0119	442	9.677 3030	543	0.322 6970	9.955 7089	100	40	
	30	9.633 0561	443	9.677 3573	542	0.322 6427	9.955 6989	100	30	
	40	9.633 1004	442	9.677 4115	543	0.322 5885	9.955 6889	101	20	
	50	9.633 1446	443	9.677 4658	543	0.322 5342	9.955 6788	100	10	
27	0	9.633 1889	442	9.677 5201	542	0.322 4799	9.955 6688	100	0	33
	10	9.633 2331	443	9.677 5743	543	0.322 4257	9.955 6588	100	50	
	20	9.633 2774	442	9.677 6286	542	0.322 3714	9.955 6488	101	40	
	30	9.633 3216	442	9.677 6828	543	0.322 3172	9.955 6387	100	30	
	40	9.633 3658	442	9.677 7371	542	0.322 2629	9.955 6287	100	20	
	50	9.633 4100	442	9.677 7913	543	0.322 2087	9.955 6187	100	10	
28	0	9.633 4542	442	9.677 8456	542	0.322 1544	9.955 6087	101	0	32
	10	9.633 4984	442	9.677 8998	542	0.322 1002	9.955 5986	100	50	
	20	9.633 5426	442	9.677 9540	543	0.322 0460	9.955 5886	100	40	
	30	9.633 5868	442	9.678 0083	542	0.321 9917	9.955 5786	100	30	
	40	9.633 6310	442	9.678 0625	542	0.321 9375	9.955 5686	101	20	
	50	9.633 6752	442	9.678 1167	542	0.321 8833	9.955 5585	100	10	
29	0	9.633 7194	442	9.678 1709	542	0.321 8291	9.955 5485	101	0	31
	10	9.633 7636	441	9.678 2251	542	0.321 7749	9.955 5384	100	50	
	20	9.633 8077	442	9.678 2793	542	0.321 7207	9.955 5284	100	40	
	30	9.633 8519	442	9.678 3335	542	0.321 6665	9.955 5184	101	30	
	40	9.633 8961	441	9.678 3877	542	0.321 6123	9.955 5083	100	20	
	50	9.633 9402	442	9.678 4419	542	0.321 5581	9.955 4983	101	10	
30	0	9.633 9844		9.678 4961		0.321 5039	9.955 4882		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

64°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.633 9844	441	9.678 4961	542	0.321 5039	9.955 4882	100	0	30
	10	9.634 0285	441	9.678 5503	542	0.321 4497	9.955 4782	100	50	
	20	9.634 0726	442	9.678 6045	541	0.321 3955	9.955 4682	101	40	
	30	9.634 1168	441	9.678 6586	542	0.321 3414	9.955 4581	100	30	
	40	9.634 1609	441	9.678 7128	542	0.321 2872	9.955 4481	101	20	
	50	9.634 2050	441	9.678 7670	541	0.321 2330	9.955 4380	100	10	
31	0	9.634 2491	441	9.678 8211	542	0.321 1789	9.955 4280	101	0	29
	10	9.634 2932	441	9.678 8753	542	0.321 1247	9.955 4179	100	50	
	20	9.634 3373	441	9.678 9295	541	0.321 0705	9.955 4079	101	40	
	30	9.634 3814	441	9.678 9836	541	0.321 0164	9.955 3978	100	30	
	40	9.634 4255	441	9.679 0377	542	0.320 9623	9.955 3878	101	20	
	50	9.634 4696	441	9.679 0919	541	0.320 9081	9.955 3777	101	10	
32	0	9.634 5137	440	9.679 1460	542	0.320 8540	9.955 3676	100	0	28
	10	9.634 5577	441	9.679 2002	541	0.320 7998	9.955 3576	101	50	
	20	9.634 6018	441	9.679 2543	541	0.320 7457	9.955 3475	100	40	
	30	9.634 6459	440	9.679 3084	541	0.320 6916	9.955 3375	101	30	
	40	9.634 6899	441	9.679 3625	541	0.320 6375	9.955 3274	101	20	
	50	9.634 7340	440	9.679 4166	542	0.320 5834	9.955 3173	100	10	
33	0	9.634 7780	441	9.679 4708	541	0.320 5292	9.955 3073	101	0	27
	10	9.634 8221	440	9.679 5249	541	0.320 4751	9.955 2972	101	50	
	20	9.634 8661	440	9.679 5790	541	0.320 4210	9.955 2871	100	40	
	30	9.634 9101	441	9.679 6331	541	0.320 3669	9.955 2771	101	30	
	40	9.634 9542	440	9.679 6872	541	0.320 3128	9.955 2670	101	20	
	50	9.634 9982	440	9.679 7413	540	0.320 2587	9.955 2569	100	10	
34	0	9.635 0422	440	9.679 7953	541	0.320 2047	9.955 2469	101	0	26
	10	9.635 0862	440	9.679 8494	541	0.320 1506	9.955 2368	101	50	
	20	9.635 1302	440	9.679 9035	541	0.320 0965	9.955 2267	101	40	
	30	9.635 1742	440	9.679 9576	540	0.320 0424	9.955 2166	100	30	
	40	9.635 2182	440	9.680 0116	541	0.319 9884	9.955 2066	101	20	
	50	9.635 2622	440	9.680 0657	541	0.319 9343	9.955 1965	101	10	
35	0	9.635 3062	439	9.680 1198	540	0.319 8802	9.955 1864	101	0	25
	10	9.635 3501	440	9.680 1738	541	0.319 8262	9.955 1763	101	50	
	20	9.635 3941	440	9.680 2279	540	0.319 7721	9.955 1662	100	40	
	30	9.635 4381	439	9.680 2819	541	0.319 7181	9.955 1562	101	30	
	40	9.635 4820	440	9.680 3360	540	0.319 6640	9.955 1461	101	20	
	50	9.635 5260	439	9.680 3900	540	0.319 6100	9.955 1360	101	10	
36	0	9.635 5699	440	9.680 4440	541	0.319 5560	9.955 1259	101	0	24
	10	9.635 6139	439	9.680 4981	540	0.319 5019	9.955 1158	101	50	
	20	9.635 6578	440	9.680 5521	540	0.319 4479	9.955 1057	101	40	
	30	9.635 7018	439	9.680 6061	540	0.319 3939	9.955 0956	101	30	
	40	9.635 7457	439	9.680 6601	541	0.319 3399	9.955 0855	101	20	
	50	9.635 7896	439	9.680 7142	540	0.319 2858	9.955 0754	101	10	
37	0	9.635 8335	439	9.680 7682	540	0.319 2318	9.955 0653	101	0	23
	10	9.635 8774	439	9.680 8222	540	0.319 1778	9.955 0552	100	50	
	20	9.635 9213	439	9.680 8762	540	0.319 1238	9.955 0452	101	40	
	30	9.635 9652	439	9.680 9302	540	0.319 0698	9.955 0351	101	30	
	40	9.636 0091	439	9.680 9842	540	0.319 0158	9.955 0250	101	20	
	50	9.636 0530	439	9.681 0382	539	0.318 9618	9.955 0149	102	10	
38	0	9.636 0969	439	9.681 0921	540	0.318 9079	9.955 0047	101	0	22
	10	9.636 1408	438	9.681 1461	540	0.318 8539	9.954 9946	101	50	
	20	9.636 1846	439	9.681 2001	540	0.318 7999	9.954 9845	101	40	
	30	9.636 2285	439	9.681 2541	539	0.318 7459	9.954 9744	101	30	
	40	9.636 2724	438	9.681 3080	540	0.318 6920	9.954 9643	101	20	
	50	9.636 3162	439	9.681 3620	540	0.318 6380	9.954 9542	101	10	
39	0	9.636 3601	438	9.681 4160	539	0.318 5840	9.954 9441	101	0	21
	10	9.636 4039	439	9.681 4699	540	0.318 5301	9.954 9340	101	50	
	20	9.636 4478	438	9.681 5239	539	0.318 4761	9.954 9239	101	40	
	30	9.636 4916	438	9.681 5778	540	0.318 4222	9.954 9138	101	30	
	40	9.636 5354	438	9.681 6318	539	0.318 3682	9.954 9037	102	20	
	50	9.636 5792	439	9.681 6857	539	0.318 3143	9.954 8935	101	10	
40	0	9.636 6231		9.681 7396		0.318 2604	9.954 8834		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	542
1	54.2
2	108.4
3	162.6
4	216.8
5	271.0
6	325.2
7	379.4
8	433.6
9	487.8

	541
1	54.1
2	108.2
3	162.3
4	216.4
5	270.5
6	324.6
7	378.7
8	432.8
9	486.9

	539
1	53.9
2	107.8
3	161.7
4	215.6
5	269.5
6	323.4
7	377.3
8	431.2
9	485.1

	441
1	44.1
2	88.2
3	132.3
4	176.4
5	220.5
6	264.6
7	308.7
8	352.8
9	396.9

	439
1	43.9
2	87.8
3	131.7
4	175.6
5	219.5
6	263.4
7	307.3
8	351.2
9	395.1

	101
1	10.1
2	20.2
3	30.3
4	40.4
5	50.5
6	60.6
7	70.7
8	80.8
9	90.9

	539	538	438	437	435	102
1	53.9	53.8	43.8	43.7	43.5	10.2
2	107.8	107.6	87.6	87.4	87.0	20.4
3	161.7	161.4	131.4	131.1	130.5	30.6
4	215.6	215.2	175.2	174.8	174.0	40.8
5	269.5	269.0	219.0	218.5	217.5	51.0
6	323.4	322.8	262.8	262.2	261.0	61.2
7	377.3	376.6	306.6	305.9	304.5	71.4
8	431.2	430.4	350.4	349.6	348.0	81.6
9	485.1	484.2	394.2	393.3	391.5	91.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.636 6231	438	9.681 7396	540	0.318 2604	9.954 8834	101	0	20
	10	9.636 6669	438	9.681 7936	539	0.318 2064	9.954 8733	101	50	
	20	9.636 7107	438	9.681 8475	539	0.318 1525	9.954 8632	101	40	
	30	9.636 7545	438	9.681 9014	539	0.318 0986	9.954 8531	102	30	
	40	9.636 7983	438	9.681 9553	540	0.318 0447	9.954 8429	101	20	
	50	9.636 8421	438	9.682 0093	539	0.317 9907	9.954 8328	101	10	
41	0	9.636 8859	437	9.682 0632	539	0.317 9368	9.954 8227	101	0	19
	10	9.636 9296	438	9.682 1171	539	0.317 8829	9.954 8126	102	50	
	20	9.636 9734	438	9.682 1710	539	0.317 8290	9.954 8024	101	40	
	30	9.637 0172	437	9.682 2249	539	0.317 7751	9.954 7923	101	30	
	40	9.637 0609	438	9.682 2788	538	0.317 7212	9.954 7822	102	20	
	50	9.637 1047	437	9.682 3326	539	0.317 6674	9.954 7720	101	10	
42	0	9.637 1484	438	9.682 3865	539	0.317 6135	9.954 7619	101	0	18
	10	9.637 1922	437	9.682 4404	539	0.317 5596	9.954 7518	102	50	
	20	9.637 2359	438	9.682 4943	539	0.317 5057	9.954 7416	101	40	
	30	9.637 2797	437	9.682 5482	538	0.317 4518	9.954 7315	101	30	
	40	9.637 3234	437	9.682 6020	539	0.317 3980	9.954 7214	102	20	
	50	9.637 3671	437	9.682 6559	539	0.317 3441	9.954 7112	101	10	
43	0	9.637 4108	438	9.682 7098	538	0.317 2902	9.954 7011	101	0	17
	10	9.637 4546	437	9.682 7636	539	0.317 2364	9.954 6910	102	50	
	20	9.637 4983	437	9.682 8175	538	0.317 1825	9.954 6808	101	40	
	30	9.637 5420	437	9.682 8713	539	0.317 1287	9.954 6707	102	30	
	40	9.637 5857	437	9.682 9252	538	0.317 0748	9.954 6605	101	20	
	50	9.637 6294	437	9.682 9790	538	0.317 0210	9.954 6504	102	10	
44	0	9.637 6731	436	9.683 0328	539	0.316 9672	9.954 6402	101	0	16
	10	9.637 7167	437	9.683 0867	538	0.316 9133	9.954 6301	102	50	
	20	9.637 7604	437	9.683 1405	538	0.316 8595	9.954 6199	101	40	
	30	9.637 8041	436	9.683 1943	538	0.316 8057	9.954 6098	102	30	
	40	9.637 8477	437	9.683 2481	538	0.316 7519	9.954 5996	101	20	
	50	9.637 8914	437	9.683 3019	538	0.316 6981	9.954 5895	102	10	
45	0	9.637 9351	436	9.683 3557	539	0.316 6443	9.954 5793	101	0	15
	10	9.637 9787	437	9.683 4096	538	0.316 5904	9.954 5692	102	50	
	20	9.638 0224	436	9.683 4634	538	0.316 5366	9.954 5590	102	40	
	30	9.638 0660	436	9.683 5172	537	0.316 4828	9.954 5488	101	30	
	40	9.638 1096	437	9.683 5709	538	0.316 4291	9.954 5387	102	20	
	50	9.638 1533	436	9.683 6247	538	0.316 3753	9.954 5285	101	10	
46	0	9.638 1969	436	9.683 6785	538	0.316 3215	9.954 5184	102	0	14
	10	9.638 2405	436	9.683 7323	538	0.316 2677	9.954 5082	102	50	
	20	9.638 2841	436	9.683 7861	537	0.316 2139	9.954 4980	101	40	
	30	9.638 3277	436	9.683 8398	538	0.316 1602	9.954 4879	102	30	
	40	9.638 3713	436	9.683 8936	538	0.316 1064	9.954 4777	102	20	
	50	9.638 4149	436	9.683 9474	537	0.316 0526	9.954 4675	101	10	
47	0	9.638 4585	436	9.684 0011	538	0.315 9989	9.954 4574	102	0	13
	10	9.638 5021	436	9.684 0549	537	0.315 9451	9.954 4472	102	50	
	20	9.638 5457	435	9.684 1086	538	0.315 8914	9.954 4370	102	40	
	30	9.638 5892	436	9.684 1624	537	0.315 8376	9.954 4268	101	30	
	40	9.638 6328	436	9.684 2161	538	0.315 7839	9.954 4167	102	20	
	50	9.638 6764	435	9.684 2699	537	0.315 7301	9.954 4065	102	10	
48	0	9.638 7199	436	9.684 3236	537	0.315 6764	9.954 3963	102	0	12
	10	9.638 7635	435	9.684 3773	538	0.315 6227	9.954 3861	102	50	
	20	9.638 8070	436	9.684 4311	537	0.315 5689	9.954 3759	101	40	
	30	9.638 8506	435	9.684 4848	537	0.315 5152	9.954 3658	102	30	
	40	9.638 8941	435	9.684 5385	537	0.315 4615	9.954 3556	102	20	
	50	9.638 9376	436	9.684 5922	537	0.315 4078	9.954 3454	102	10	
49	0	9.638 9812	435	9.684 6459	537	0.315 3541	9.954 3352	102	0	11
	10	9.639 0247	435	9.684 6996	537	0.315 3004	9.954 3250	102	50	
	20	9.639 0682	435	9.684 7533	537	0.315 2467	9.954 3148	102	40	
	30	9.639 1117	435	9.684 8070	537	0.315 1930	9.954 3046	101	30	
	40	9.639 1552	435	9.684 8607	537	0.315 1393	9.954 2945	102	20	
	50	9.639 1987	435	9.684 9144	537	0.315 0856	9.954 2843	102	10	
50	0	9.639 2422		9.684 9681		0.315 0319	9.954 2741		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

64°

25°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.639 2422	435	9.684 9681	537	0.315 0319	9.954 2741	102	0	10
	10	9.639 2857	435	9.685 0218	537	0.314 9782	9.954 2639	102	50	
	20	9.639 3292	434	9.685 0755	536	0.314 9245	9.954 2537	102	40	
	30	9.639 3726	435	9.685 1291	537	0.314 8709	9.954 2435	102	30	
	40	9.639 4161	435	9.685 1828	537	0.314 8172	9.954 2333	102	20	
	50	9.639 4596	434	9.685 2365	536	0.314 7635	9.954 2231	102	10	
51	0	9.639 5030	435	9.685 2901	537	0.314 7099	9.954 2129	102	0	9
	10	9.639 5465	434	9.685 3438	537	0.314 6562	9.954 2027	102	50	
	20	9.639 5899	435	9.685 3975	536	0.314 6025	9.954 1925	102	40	
	30	9.639 6334	434	9.685 4511	536	0.314 5489	9.954 1823	102	30	
	40	9.639 6768	435	9.685 5047	537	0.314 4953	9.954 1721	102	20	
	50	9.639 7203	434	9.685 5584	536	0.314 4416	9.954 1619	102	10	
52	0	9.639 7637	434	9.685 6120	537	0.314 3880	9.954 1517	103	0	8
	10	9.639 8071	434	9.685 6657	536	0.314 3343	9.954 1414	102	50	
	20	9.639 8505	434	9.685 7193	536	0.314 2807	9.954 1312	102	40	
	30	9.639 8939	434	9.685 7729	536	0.314 2271	9.954 1210	102	30	
	40	9.639 9373	434	9.685 8265	536	0.314 1735	9.954 1108	102	20	
	50	9.639 9807	434	9.685 8801	537	0.314 1199	9.954 1006	102	10	
53	0	9.640 0241	434	9.685 9338	536	0.314 0662	9.954 0904	102	0	7
	10	9.640 0675	434	9.685 9874	536	0.314 0126	9.954 0802	103	50	
	20	9.640 1109	434	9.686 0410	536	0.313 9590	9.954 0699	102	40	
	30	9.640 1543	434	9.686 0946	536	0.313 9054	9.954 0597	102	30	
	40	9.640 1977	433	9.686 1482	536	0.313 8518	9.954 0495	102	20	
	50	9.640 2410	434	9.686 2018	535	0.313 7982	9.954 0393	102	10	
54	0	9.640 2844	434	9.686 2553	536	0.313 7447	9.954 0291	103	0	6
	10	9.640 3278	433	9.686 3089	536	0.313 6911	9.954 0188	102	50	
	20	9.640 3711	434	9.686 3625	536	0.313 6375	9.954 0086	102	40	
	30	9.640 4145	433	9.686 4161	536	0.313 5839	9.953 9984	102	30	
	40	9.640 4578	433	9.686 4697	535	0.313 5303	9.953 9882	103	20	
	50	9.640 5011	434	9.686 5232	536	0.313 4768	9.953 9779	102	10	
55	0	9.640 5445	433	9.686 5768	535	0.313 4232	9.953 9677	102	0	5
	10	9.640 5878	433	9.686 6303	536	0.313 3697	9.953 9575	103	50	
	20	9.640 6311	433	9.686 6839	535	0.313 3161	9.953 9472	102	40	
	30	9.640 6744	434	9.686 7374	536	0.313 2626	9.953 9370	102	30	
	40	9.640 7178	433	9.686 7910	535	0.313 2090	9.953 9268	103	20	
	50	9.640 7611	433	9.686 8445	536	0.313 1555	9.953 9165	102	10	
56	0	9.640 8044	433	9.686 8981	535	0.313 1019	9.953 9063	103	0	4
	10	9.640 8477	432	9.686 9516	535	0.313 0484	9.953 8960	102	50	
	20	9.640 8909	433	9.687 0051	536	0.312 9949	9.953 8858	102	40	
	30	9.640 9342	433	9.687 0587	535	0.312 9413	9.953 8756	103	30	
	40	9.640 9775	433	9.687 1122	535	0.312 8878	9.953 8653	102	20	
	50	9.641 0208	432	9.687 1657	535	0.312 8343	9.953 8551	103	10	
57	0	9.641 0640	433	9.687 2192	535	0.312 7808	9.953 8448	102	0	3
	10	9.641 1073	433	9.687 2727	535	0.312 7273	9.953 8346	103	50	
	20	9.641 1506	432	9.687 3262	535	0.312 6738	9.953 8243	102	40	
	30	9.641 1938	433	9.687 3797	535	0.312 6203	9.953 8141	103	30	
	40	9.641 2371	432	9.687 4332	535	0.312 5668	9.953 8038	102	20	
	50	9.641 2803	432	9.687 4867	535	0.312 5133	9.953 7936	103	10	
58	0	9.641 3235	433	9.687 5402	535	0.312 4598	9.953 7833	102	0	2
	10	9.641 3668	432	9.687 5937	535	0.312 4063	9.953 7731	103	50	
	20	9.641 4100	432	9.687 6472	535	0.312 3528	9.953 7628	102	40	
	30	9.641 4532	432	9.687 7007	534	0.312 2993	9.953 7526	103	30	
	40	9.641 4964	432	9.687 7541	535	0.312 2459	9.953 7423	103	20	
	50	9.641 5396	432	9.687 8076	535	0.312 1924	9.953 7320	102	10	
59	0	9.641 5828	432	9.687 8611	534	0.312 1389	9.953 7218	103	0	1
	10	9.641 6260	432	9.687 9145	535	0.312 0855	9.953 7115	102	50	
	20	9.641 6692	432	9.687 9680	534	0.312 0320	9.953 7013	103	40	
	30	9.641 7124	432	9.688 0214	535	0.311 9786	9.953 6910	103	30	
	40	9.641 7556	432	9.688 0749	534	0.311 9251	9.953 6807	102	20	
	50	9.641 7988	432	9.688 1283	535	0.311 8717	9.953 6705	103	10	
60	0	9.641 8420		9.688 1818		0.311 8182	9.953 6602		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

64°

537	
1	53.7
2	107.4
3	161.1
4	214.8
5	268.5
6	322.2
7	375.9
8	429.6
9	483.3

536	
1	53.6
2	107.2
3	160.8
4	214.4
5	268.0
6	321.6
7	375.2
8	428.8
9	482.4

535	
1	53.5
2	107.0
3	160.5
4	214.0
5	267.5
6	321.0
7	374.5
8	428.0
9	481.5

434	
1	43.4
2	86.8
3	130.2
4	173.6
5	217.0
6	260.4
7	303.8
8	347.2
9	390.6

433	
1	43.3
2	86.6
3	129.9
4	173.2
5	216.5
6	259.8
7	303.1
8	346.4
9	389.7

103	
1	10.3
2	20.6
3	30.9
4	41.2
5	51.5
6	61.8
7	72.1
8	82.4
9	92.7

26°

534	
1	53.4
2	106.8
3	160.2
4	213.6
5	267.0
6	320.4
7	373.8
8	427.2
9	480.6

533	
1	53.3
2	106.6
3	159.9
4	213.2
5	266.5
6	319.8
7	373.1
8	426.4
9	479 7

532	
1	53.2
2	106.4
3	159.6
4	212.8
5	266.0
6	319.2
7	372.4
8	425.6
9	478.8

431	
1	43.1
2	86.2
3	129.3
4	172.4
5	215.5
6	258.6
7	301.7
8	344.8
9	387.9

429	
1	42.9
2	85.8
3	128.7
4	171.6
5	214.5
6	257.4
7	300.3
8	343.2
9	386.1

103	
1	10.3
2	20.6
3	30.9
4	41.2
5	51.5
6	61.8
7	72.1
8	82.4
9	92.7

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.641 8420	431	9.688 1818	534	0.311 8182	9.953 6602	103	0	60
	10	9.641 8851	432	9.688 2352	534	0.311 7648	9.953 6499	103	50	
	20	9.641 9283	431	9.688 2886	535	0.311 7114	9.953 6396	102	40	
	30	9.641 9714	432	9.688 3421	534	0.311 6579	9.953 6294	103	30	
	40	9.642 0146	431	9.688 3955	534	0.311 6045	9.953 6191	103	20	
	50	9.642 0577	432	9.688 4489	534	0.311 5511	9.953 6088	103	10	
1	0	9.642 1009	431	9.688 5023	534	0.311 4977	9.953 5985	102	0	59
	10	9.642 1440	431	9.688 5557	535	0.311 4443	9.953 5883	103	50	
	20	9.642 1871	432	9.688 6092	534	0.311 3908	9.953 5780	103	40	
	30	9.642 2303	431	9.688 6626	534	0.311 3374	9.953 5677	103	30	
	40	9.642 2734	431	9.688 7160	534	0.311 2840	9.953 5574	103	20	
	50	9.642 3165	431	9.688 7694	533	0.311 2306	9.953 5471	102	10	
2	0	9.642 3596	431	9.688 8227	534	0.311 1773	9.953 5369	103	0	58
	10	9.642 4027	431	9.688 8761	534	0.311 1239	9.953 5266	103	50	
	20	9.642 4458	431	9.688 9295	534	0.311 0705	9.953 5163	103	40	
	30	9.642 4889	431	9.688 9829	534	0.311 0171	9.953 5060	103	30	
	40	9.642 5320	431	9.689 0363	534	0.310 9637	9.953 4957	103	20	
	50	9.642 5751	431	9.689 0897	533	0.310 9103	9.953 4854	103	10	
3	0	9.642 6182	430	9.689 1430	534	0.310 8570	9.953 4751	103	0	57
	10	9.642 6612	431	9.689 1964	533	0.310 8036	9.953 4648	103	50	
	20	9.642 7043	431	9.689 2497	534	0.310 7503	9.953 4545	102	40	
	30	9.642 7474	430	9.689 3031	534	0.310 6969	9.953 4443	103	30	
	40	9.642 7904	431	9.689 3565	533	0.310 6435	9.953 4340	103	20	
	50	9.642 8335	430	9.689 4098	533	0.310 5902	9.953 4237	103	10	
4	0	9.642 8765	430	9.689 4631	534	0.310 5369	9.953 4134	103	0	56
	10	9.642 9195	431	9.689 5165	533	0.310 4835	9.953 4031	103	50	
	20	9.642 9626	430	9.689 5698	534	0.310 4302	9.953 3928	103	40	
	30	9.643 0056	430	9.689 6232	533	0.310 3768	9.953 3825	103	30	
	40	9.643 0486	430	9.689 6765	533	0.310 3235	9.953 3722	104	20	
	50	9.643 0916	431	9.689 7298	533	0.310 2702	9.953 3618	103	10	
5	0	9.643 1347	430	9.689 7831	533	0.310 2169	9.953 3515	103	0	55
	10	9.643 1777	430	9.689 8364	534	0.310 1636	9.953 3412	103	50	
	20	9.643 2207	430	9.689 8898	533	0.310 1102	9.953 3309	103	40	
	30	9.643 2637	430	9.689 9431	533	0.310 0569	9.953 3206	103	30	
	40	9.643 3067	429	9.689 9964	533	0.310 0036	9.953 3103	103	20	
	50	9.643 3496	430	9.690 0497	533	0.309 9503	9.953 3000	103	10	
6	0	9.643 3926	430	9.690 1030	533	0.309 8970	9.953 2897	103	0	54
	10	9.643 4356	430	9.690 1563	532	0.309 8437	9.953 2794	104	50	
	20	9.643 4786	429	9.690 2095	533	0.309 7905	9.953 2690	103	40	
	30	9.643 5215	430	9.690 2628	533	0.309 7372	9.953 2587	103	30	
	40	9.643 5645	430	9.690 3161	533	0.309 6839	9.953 2484	103	20	
	50	9.643 6075	429	9.690 3694	532	0.309 6306	9.953 2381	103	10	
7	0	9.643 6504	430	9.690 4226	533	0.309 5774	9.953 2278	104	0	53
	10	9.643 6934	429	9.690 4759	533	0.309 5241	9.953 2174	103	50	
	20	9.643 7363	429	9.690 5292	532	0.309 4708	9.953 2071	103	40	
	30	9.643 7792	430	9.690 5824	533	0.309 4176	9.953 1968	103	30	
	40	9.643 8222	429	9.690 6357	532	0.309 3643	9.953 1865	104	20	
	50	9.643 8651	429	9.690 6889	533	0.309 3111	9.953 1761	103	10	
8	0	9.643 9080	429	9.690 7422	532	0.309 2578	9.953 1658	103	0	52
	10	9.643 9509	429	9.690 7954	533	0.309 2046	9.953 1555	104	50	
	20	9.643 9938	429	9.690 8487	532	0.309 1513	9.953 1451	103	40	
	30	9.644 0367	429	9.690 9019	532	0.309 0981	9.953 1348	103	30	
	40	9.644 0796	429	9.690 9551	533	0.309 0449	9.953 1245	104	20	
	50	9.644 1225	429	9.691 0084	532	0.308 9916	9.953 1141	103	10	
9	0	9.644 1654	429	9.691 0616	532	0.308 9384	9.953 1038	103	0	51
	10	9.644 2083	429	9.691 1148	532	0.308 8852	9.953 0935	104	50	
	20	9.644 2512	428	9.691 1680	532	0.308 8320	9.953 0831	103	40	
	30	9.644 2940	429	9.691 2212	533	0.308 7788	9.953 0728	104	30	
	40	9.644 3369	429	9.691 2745	532	0.308 7255	9.953 0624	103	20	
	50	9.644 3798	428	9.691 3277	532	0.308 6723	9.953 0521	103	10	
10	0	9.644 4226		9.691 3809		0.308 6191	9.953 0418		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

63°

26°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.644 4226	429	9.691 3809	532	0.308 6191	9.953 0418	104	0	50
	10	9.644 4655	428	9.691 4341	531	0.308 5659	9.953 0314	103	50	
	20	9.644 5083	428	9.691 4872	532	0.308 5128	9.953 0211	104	40	
	30	9.644 5511	429	9.691 5404	532	0.308 4596	9.953 0107	103	30	
	40	9.644 5940	428	9.691 5936	532	0.308 4064	9.953 0004	104	20	
	50	9.644 6368	428	9.691 6468	532	0.308 3532	9.952 9900	103	10	
11	0	9.644 6796	429	9.691 7000	531	0.308 3000	9.952 9797	104	0	49
	10	9.644 7225	428	9.691 7531	532	0.308 2469	9.952 9693	104	50	
	20	9.644 7653	428	9.691 8063	532	0.308 1937	9.952 9589	103	40	
	30	9.644 8081	428	9.691 8595	531	0.308 1405	9.952 9486	104	30	
	40	9.644 8509	428	9.691 9126	532	0.308 0874	9.952 9382	103	20	
	50	9.644 8937	428	9.691 9658	531	0.308 0342	9.952 9279	104	10	
12	0	9.644 9365	428	9.692 0189	532	0.307 9811	9.952 9175	103	0	48
	10	9.644 9793	427	9.692 0721	531	0.307 9279	9.952 9072	104	50	
	20	9.645 0220	428	9.692 1252	532	0.307 8748	9.952 8968	104	40	
	30	9.645 0648	428	9.692 1784	531	0.307 8216	9.952 8864	103	30	
	40	9.645 1076	427	9.692 2315	531	0.307 7685	9.952 8761	104	20	
	50	9.645 1503	428	9.692 2846	532	0.307 7154	9.952 8657	104	10	
13	0	9.645 1931	428	9.692 3378	531	0.307 6622	9.952 8553	103	0	47
	10	9.645 2359	427	9.692 3909	531	0.307 6091	9.952 8450	104	50	
	20	9.645 2786	428	9.692 4440	531	0.307 5560	9.952 8346	104	40	
	30	9.645 3214	427	9.692 4971	532	0.307 5029	9.952 8242	103	30	
	40	9.645 3641	427	9.692 5503	531	0.307 4497	9.952 8139	104	20	
	50	9.645 4068	428	9.692 6034	531	0.307 3966	9.952 8035	104	10	
14	0	9.645 4496	427	9.692 6565	531	0.307 3435	9.952 7931	104	0	46
	10	9.645 4923	427	9.692 7096	531	0.307 2904	9.952 7827	104	50	
	20	9.645 5350	427	9.692 7627	531	0.307 2373	9.952 7723	103	40	
	30	9.645 5777	427	9.692 8158	530	0.307 1842	9.952 7620	104	30	
	40	9.645 6204	427	9.692 8688	531	0.307 1312	9.952 7516	104	20	
	50	9.645 6631	427	9.692 9219	531	0.307 0781	9.952 7412	104	10	
15	0	9.645 7058	427	9.692 9750	531	0.307 0250	9.952 7308	104	0	45
	10	9.645 7485	427	9.693 0281	531	0.306 9719	9.952 7204	103	50	
	20	9.645 7912	427	9.693 0812	530	0.306 9188	9.952 7101	104	40	
	30	9.645 8339	427	9.693 1342	531	0.306 8658	9.952 6997	104	30	
	40	9.645 8766	426	9.693 1873	531	0.306 8127	9.952 6893	104	20	
	50	9.645 9192	427	9.693 2404	530	0.306 7596	9.952 6789	104	10	
16	0	9.645 9619	427	9.693 2934	531	0.306 7066	9.952 6685	104	0	44
	10	9.646 0046	426	9.693 3465	530	0.306 6535	9.952 6581	104	50	
	20	9.646 0472	427	9.693 3995	531	0.306 6005	9.952 6477	104	40	
	30	9.646 0899	426	9.693 4526	530	0.306 5474	9.952 6373	104	30	
	40	9.646 1325	427	9.693 5056	530	0.306 4944	9.952 6269	104	20	
	50	9.646 1752	426	9.693 5586	531	0.306 4414	9.952 6165	104	10	
17	0	9.646 2178	426	9.693 6117	530	0.306 3883	9.952 6061	104	0	43
	10	9.646 2604	427	9.693 6647	530	0.306 3353	9.952 5957	104	50	
	20	9.646 3031	426	9.693 7177	531	0.306 2823	9.952 5853	104	40	
	30	9.646 3457	426	9.693 7708	530	0.306 2292	9.952 5749	104	30	
	40	9.646 3883	426	9.693 8238	530	0.306 1762	9.952 5645	104	20	
	50	9.646 4309	426	9.693 8768	530	0.306 1232	9.952 5541	104	10	
18	0	9.646 4735	426	9.693 9298	530	0.306 0702	9.952 5437	104	0	42
	10	9.646 5161	426	9.693 9828	530	0.306 0172	9.952 5333	104	50	
	20	9.646 5587	426	9.694 0358	530	0.305 9642	9.952 5229	104	40	
	30	9.646 6013	426	9.694 0888	530	0.305 9112	9.952 5125	104	30	
	40	9.646 6439	426	9.694 1418	530	0.305 8582	9.952 5021	104	20	
	50	9.646 6865	425	9.694 1948	530	0.305 8052	9.952 4917	104	10	
19	0	9.646 7290	426	9.694 2478	530	0.305 7522	9.952 4813	105	0	41
	10	9.646 7716	426	9.694 3008	529	0.305 6992	9.952 4708	104	50	
	20	9.646 8142	425	9.694 3537	530	0.305 6463	9.952 4604	104	40	
	30	9.646 8567	426	9.694 4067	530	0.305 5933	9.952 4500	104	30	
	40	9.646 8993	425	9.694 4597	529	0.305 5403	9.952 4396	104	20	
	50	9.646 9418	426	9.694 5126	530	0.305 4874	9.952 4292	104	10	
20	0	9.646 9844		9.694 5656		0.305 4344	9.952 4188		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

63°

531	
1	53.1
2	106.2
3	159.3
4	212.4
5	265.5
6	318.6
7	371.7
8	424.8
9	477.9

530	
1	53.0
2	106.0
3	159.0
4	212.0
5	265.0
6	318.0
7	371.0
8	424.0
9	477.0

428	
1	42.8
2	85.6
3	128.4
4	171.2
5	214.0
6	256.8
7	299.6
8	342.4
9	385.2

427	
1	42.7
2	85.4
3	128.1
4	170.8
5	213.5
6	256.2
7	298.9
8	341.6
9	384.3

426	
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

104	
1	10.4
2	20.8
3	31.2
4	41.6
5	52.0
6	62.4
7	72.8
8	83.2
9	93.6

26°

529	
1	52.9
2	105.8
3	158.7
4	211.6
5	264.5
6	317.4
7	370.3
8	423.2
9	476.1

528	
1	52.8
2	105.6
3	158.4
4	211.2
5	264.0
6	316.8
7	369.6
8	422.4
9	475.2

527	
1	52.7
2	105.4
3	158.1
4	210.8
5	263.5
6	316.2
7	368.9
8	421.6
9	474.3

425	
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

424	
1	42.4
2	84.8
3	127.2
4	169.6
5	212.0
6	254.4
7	296.8
8	339.2
9	381.6

105	
1	10.5
2	21.0
3	31.5
4	42.0
5	52.5
6	63.0
7	73.5
8	84.0
9	94.5

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.646 9844	425	9.694 5656	530	0.305 4344	9.952 4188	105	0	40
	10	9.647 0269	425	9.694 6186	529	0.305 3814	9.952 4083	104	50	
	20	9.647 0694	426	9.694 6715	530	0.305 3285	9.952 3979	104	40	
	30	9.647 1120	425	9.694 7245	529	0.305 2755	9.952 3875	104	30	
	40	9.647 1545	425	9.694 7774	530	0.305 2226	9.952 3771	105	20	
	50	9.647 1970	425	9.694 8304	529	0.305 1696	9.952 3666	104	10	
21	0	9.647 2395	425	9.694 8833	529	0.305 1167	9.952 3562	104	0	39
	10	9.647 2820	425	9.694 9362	530	0.305 0638	9.952 3458	105	50	
	20	9.647 3245	425	9.694 9892	529	0.305 0108	9.952 3353	104	40	
	30	9.647 3670	425	9.695 0421	529	0.304 9579	9.952 3249	104	30	
	40	9.647 4095	425	9.695 0950	529	0.304 9050	9.952 3145	105	20	
	50	9.647 4520	425	9.695 1479	530	0.304 8521	9.952 3040	104	10	
22	0	9.647 4945	424	9.695 2009	529	0.304 7991	9.952 2936	104	0	38
	10	9.647 5369	425	9.695 2538	529	0.304 7462	9.952 2832	105	50	
	20	9.647 5794	425	9.695 3067	529	0.304 6933	9.952 2727	104	40	
	30	9.647 6219	424	9.695 3596	529	0.304 6404	9.952 2623	104	30	
	40	9.647 6643	425	9.695 4125	529	0.304 5875	9.952 2519	105	20	
	50	9.647 7068	424	9.695 4654	529	0.304 5346	9.952 2414	104	10	
23	0	9.647 7492	425	9.695 5183	529	0.304 4817	9.952 2310	105	0	37
	10	9.647 7917	424	9.695 5712	528	0.304 4288	9.952 2205	104	50	
	20	9.647 8341	425	9.695 6240	529	0.304 3760	9.952 2101	105	40	
	30	9.647 8766	424	9.695 6769	529	0.304 3231	9.952 1996	104	30	
	40	9.647 9190	424	9.695 7298	529	0.304 2702	9.952 1892	105	20	
	50	9.647 9614	424	9.695 7827	528	0.304 2173	9.952 1787	104	10	
24	0	9.648 0038	424	9.695 8355	529	0.304 1645	9.952 1683	105	0	36
	10	9.648 0462	424	9.695 8884	529	0.304 1116	9.952 1578	104	50	
	20	9.648 0886	424	9.695 9413	528	0.304 0587	9.952 1474	105	40	
	30	9.648 1310	424	9.695 9941	529	0.304 0059	9.952 1369	104	30	
	40	9.648 1734	424	9.696 0470	528	0.303 9530	9.952 1265	105	20	
	50	9.648 2158	424	9.696 0998	529	0.303 9002	9.952 1160	105	10	
25	0	9.648 2582	424	9.696 1527	528	0.303 8473	9.952 1055	104	0	35
	10	9.648 3006	424	9.696 2055	529	0.303 7945	9.952 0951	105	50	
	20	9.648 3430	424	9.696 2584	528	0.303 7416	9.952 0846	104	40	
	30	9.648 3854	423	9.696 3112	528	0.303 6888	9.952 0742	105	30	
	40	9.648 4277	424	9.696 3640	528	0.303 6360	9.952 0637	105	20	
	50	9.648 4701	423	9.696 4168	529	0.303 5832	9.952 0532	104	10	
26	0	9.648 5124	424	9.696 4697	528	0.303 5303	9.952 0428	105	0	34
	10	9.648 5548	423	9.696 5225	528	0.303 4775	9.952 0323	105	50	
	20	9.648 5971	424	9.696 5753	528	0.303 4247	9.952 0218	104	40	
	30	9.648 6395	423	9.696 6281	528	0.303 3719	9.952 0114	105	30	
	40	9.648 6818	423	9.696 6809	528	0.303 3191	9.952 0009	105	20	
	50	9.648 7241	424	9.696 7337	528	0.303 2663	9.951 9904	105	10	
27	0	9.648 7665	423	9.696 7865	528	0.303 2135	9.951 9799	104	0	33
	10	9.648 8088	423	9.696 8393	528	0.303 1607	9.951 9695	105	50	
	20	9.648 8511	423	9.696 8921	528	0.303 1079	9.951 9590	105	40	
	30	9.648 8934	423	9.696 9449	528	0.303 0551	9.951 9485	105	30	
	40	9.648 9357	423	9.696 9977	528	0.303 0023	9.951 9380	105	20	
	50	9.648 9780	423	9.697 0505	527	0.302 9495	9.951 9275	104	10	
28	0	9.649 0203	423	9.697 1032	528	0.302 8968	9.951 9171	105	0	32
	10	9.649 0626	423	9.697 1560	528	0.302 8440	9.951 9066	105	50	
	20	9.649 1049	423	9.697 2088	527	0.302 7912	9.951 8961	105	40	
	30	9.649 1472	422	9.697 2615	528	0.302 7385	9.951 8856	105	30	
	40	9.649 1894	423	9.697 3143	528	0.302 6857	9.951 8751	105	20	
	50	9.649 2317	423	9.697 3671	527	0.302 6329	9.951 8646	105	10	
29	0	9.649 2740	422	9.697 4198	528	0.302 5802	9.951 8541	104	0	31
	10	9.649 3162	423	9.697 4726	527	0.302 5274	9.951 8437	105	50	
	20	9.649 3585	422	9.697 5253	528	0.302 4747	9.951 8332	105	40	
	30	9.649 4007	423	9.697 5781	527	0.302 4219	9.951 8227	105	30	
	40	9.649 4430	422	9.697 6308	527	0.302 3692	9.951 8122	105	20	
	50	9.649 4852	422	9.697 6835	528	0.302 3165	9.951 8017	105	10	
30	0	9.649 5274		9.697 7363		0.302 2637	9.951 7912		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

63°

26°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.649 5274	423	9.697 7363	527	0.302 2637	9.951 7912	105	0	30
	10	9.649 5697	422	9.697 7890	527	0.302 2110	9.951 7807	105	50	
	20	9.649 6119	422	9.697 8417	527	0.302 1583	9.951 7702	105	40	
	30	9.649 6541	422	9.697 8944	527	0.302 1056	9.951 7597	105	30	
	40	9.649 6963	422	9.697 9471	527	0.302 0529	9.951 7492	105	20	
	50	9.649 7385	422	9.697 9998	528	0.302 0002	9.951 7387	105	10	
31	0	9.649 7807	422	9.698 0526	527	0.301 9474	9.951 7282	105	0	29
	10	9.649 8229	422	9.698 1053	527	0.301 8947	9.951 7177	105	50	
	20	9.649 8651	422	9.698 1580	526	0.301 8420	9.951 7072	105	40	
	30	9.649 9073	422	9.698 2106	527	0.301 7894	9.951 6967	106	30	
	40	9.649 9495	422	9.698 2633	527	0.301 7367	9.951 6861	105	20	
	50	9.649 9917	421	9.698 3160	527	0.301 6840	9.951 6756	105	10	
32	0	9.650 0338	422	9.698 3687	527	0.301 6313	9.951 6651	105	0	28
	10	9.650 0760	422	9.698 4214	527	0.301 5786	9.951 6546	105	50	
	20	9.650 1182	421	9.698 4741	526	0.301 5259	9.951 6441	105	40	
	30	9.650 1603	422	9.698 5267	527	0.301 4733	9.951 6336	105	30	
	40	9.650 2025	421	9.698 5794	527	0.301 4206	9.951 6231	106	20	
	50	9.650 2446	422	9.698 6321	526	0.301 3679	9.951 6125	105	10	
33	0	9.650 2868	421	9.698 6847	527	0.301 3153	9.951 6020	105	0	27
	10	9.650 3289	421	9.698 7374	526	0.301 2626	9.951 5915	105	50	
	20	9.650 3710	421	9.698 7900	527	0.301 2100	9.951 5810	106	40	
	30	9.650 4131	422	9.698 8427	526	0.301 1573	9.951 5704	105	30	
	40	9.650 4553	421	9.698 8953	527	0.301 1047	9.951 5599	105	20	
	50	9.650 4974	421	9.698 9480	526	0.301 0520	9.951 5494	105	10	
34	0	9.650 5395	421	9.699 0006	527	0.300 9994	9.951 5389	106	0	26
	10	9.650 5816	421	9.699 0533	526	0.300 9467	9.951 5283	105	50	
	20	9.650 6237	421	9.699 1059	526	0.300 8941	9.951 5178	105	40	
	30	9.650 6658	421	9.699 1585	526	0.300 8415	9.951 5073	106	30	
	40	9.650 7079	421	9.699 2111	526	0.300 7889	9.951 4967	105	20	
	50	9.650 7500	420	9.699 2637	527	0.300 7363	9.951 4862	105	10	
35	0	9.650 7920	421	9.699 3164	526	0.300 6836	9.951 4757	106	0	25
	10	9.650 8341	421	9.699 3690	526	0.300 6310	9.951 4651	105	50	
	20	9.650 8762	420	9.699 4216	526	0.300 5784	9.951 4546	105	40	
	30	9.650 9182	421	9.699 4742	526	0.300 5258	9.951 4441	106	30	
	40	9.650 9603	421	9.699 5268	526	0.300 4732	9.951 4335	105	20	
	50	9.651 0024	420	9.699 5794	526	0.300 4206	9.951 4230	106	10	
36	0	9.651 0444	421	9.699 6320	526	0.300 3680	9.951 4124	105	0	24
	10	9.651 0865	420	9.699 6846	525	0.300 3154	9.951 4019	106	50	
	20	9.651 1285	420	9.699 7371	526	0.300 2629	9.951 3913	105	40	
	30	9.651 1705	421	9.699 7897	526	0.300 2103	9.951 3808	105	30	
	40	9.651 2126	420	9.699 8423	526	0.300 1577	9.951 3703	106	20	
	50	9.651 2546	420	9.699 8949	525	0.300 1051	9.951 3597	105	10	
37	0	9.651 2966	420	9.699 9474	526	0.300 0526	9.951 3492	106	0	23
	10	9.651 3386	420	9.700 0000	526	0.300 0000	9.951 3386	106	50	
	20	9.651 3806	420	9.700 0526	525	0.299 9474	9.951 3280	105	40	
	30	9.651 4226	420	9.700 1051	526	0.299 8949	9.951 3175	106	30	
	40	9.651 4646	420	9.700 1577	525	0.299 8423	9.951 3069	105	20	
	50	9.651 5066	420	9.700 2102	526	0.299 7898	9.951 2964	106	10	
38	0	9.651 5486	420	9.700 2628	525	0.299 7372	9.951 2858	105	0	22
	10	9.651 5906	420	9.700 3153	526	0.299 6847	9.951 2753	106	50	
	20	9.651 6326	419	9.700 3679	525	0.299 6321	9.951 2647	106	40	
	30	9.651 6745	420	9.700 4204	525	0.299 5796	9.951 2541	105	30	
	40	9.651 7165	420	9.700 4729	525	0.299 5271	9.951 2436	106	20	
	50	9.651 7585	419	9.700 5254	526	0.299 4746	9.951 2330	106	10	
39	0	9.651 8004	420	9.700 5780	525	0.299 4220	9.951 2224	105	0	21
	10	9.651 8424	419	9.700 6305	525	0.299 3695	9.951 2119	106	50	
	20	9.651 8843	420	9.700 6830	525	0.299 3170	9.951 2013	106	40	
	30	9.651 9263	419	9.700 7355	525	0.299 2645	9.951 1907	105	30	
	40	9.651 9682	419	9.700 7880	525	0.299 2120	9.951 1802	106	20	
	50	9.652 0101	420	9.700 8405	525	0.299 1595	9.951 1696	106	10	
40	0	9.652 0521		9.700 8930		0.299 1070	9.951 1590		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

63°

	526
1	52.6
2	105.2
3	157.8
4	210.4
5	263.0
6	315.6
7	368.2
8	420.8
9	473.4

	525
1	52.5
2	105.0
3	157.5
4	210.0
5	262.5
6	315.0
7	367.5
8	420.0
9	472.5

	423
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	421
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

	106
1	10.6
2	21.2
3	31.8
4	42.4
5	53.0
6	63.6
7	74.2
8	84.8
9	95.4

26°

525	
1	52.5
2	105.0
3	157.5
4	210.0
5	262.5
6	315.0
7	367.5
8	420.0
9	472.5

524	
1	52.4
2	104.8
3	157.2
4	209.6
5	262.0
6	314.4
7	366.8
8	419.2
9	471.6

523	
1	52.3
2	104.6
3	156.9
4	209.2
5	261.5
6	313.8
7	366.1
8	418.4
9	470.7

418	
1	41.8
2	83.6
3	125.4
4	167.2
5	209.0
6	250.8
7	292.6
8	334.4
9	376.2

417	
1	41.7
2	83.4
3	125.1
4	166.8
5	108.5
6	250.2
7	291.9
8	333.6
9	375.3

106	
1	10.6
2	21.2
3	31.8
4	42.4
5	53.0
6	63.6
7	74.2
8	84.8
9	95.4

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.652 0521	419	9.700 8930	525	0.299 1070	9.951 1590	106	0	20
	10	9.652 0940	419	9.700 9455	525	0.299 0545	9.951 1484	105	50	
	20	9.652 1359	419	9.700 9980	525	0.299 0020	9.951 1379	106	40	
	30	9.652 1778	419	9.701 0505	525	0.298 9495	9.951 1273	106	30	
	40	9.652 2197	419	9.701 1030	525	0.298 8970	9.951 1167	106	20	
	50	9.652 2616	419	9.701 1555	525	0.298 8445	9.951 1061	105	10	
41	0	9.652 3035	419	9.701 2080	524	0.298 7920	9.951 0956	106	0	19
	10	9.652 3454	419	9.701 2604	525	0.298 7396	9.951 0850	106	50	
	20	9.652 3873	419	9.701 3129	525	0.298 6871	9.951 0744	106	40	
	30	9.652 4292	418	9.701 3654	524	0.298 6346	9.951 0638	106	30	
	40	9.652 4710	419	9.701 4178	525	0.298 5822	9.951 0532	106	20	
	50	9.652 5129	419	9.701 4703	524	0.298 5297	9.951 0426	106	10	
42	0	9.652 5548	418	9.701 5227	525	0.298 4773	9.951 0320	106	0	18
	10	9.652 5966	419	9.701 5752	524	0.298 4248	9.951 0214	105	50	
	20	9.652 6385	419	9.701 6276	525	0.298 3724	9.951 0109	106	40	
	30	9.652 6804	418	9.701 6801	524	0.298 3199	9.951 0003	106	30	
	40	9.652 7222	418	9.701 7325	525	0.298 2675	9.950 9897	106	20	
	50	9.652 7640	419	9.701 7850	524	0.298 2150	9.950 9791	106	10	
43	0	9.652 8059	418	9.701 8374	524	0.298 1626	9.950 9685	106	0	17
	10	9.652 8477	418	9.701 8898	524	0.298 1102	9.950 9579	106	50	
	20	9.652 8895	418	9.701 9422	525	0.298 0578	9.950 9473	106	40	
	30	9.652 9313	419	9.701 9947	524	0.298 0053	9.950 9367	106	30	
	40	9.652 9732	418	9.702 0471	524	0.297 9529	9.950 9261	106	20	
	50	9.653 0150	418	9.702 0995	524	0.297 9005	9.950 9155	106	10	
44	0	9.653 0568	418	9.702 1519	524	0.297 8481	9.950 9049	106	0	16
	10	9.653 0986	418	9.702 2043	524	0.297 7957	9.950 8943	106	50	
	20	9.653 1404	418	9.702 2567	524	0.297 7433	9.950 8837	106	40	
	30	9.653 1822	418	9.702 3091	524	0.297 6909	9.950 8731	107	30	
	40	9.653 2240	417	9.702 3615	524	0.297 6385	9.950 8624	106	20	
	50	9.653 2657	418	9.702 4139	524	0.297 5861	9.950 8518	106	10	
45	0	9.653 3075	418	9.702 4663	524	0.297 5337	9.950 8412	106	0	15
	10	9.653 3493	417	9.702 5187	524	0.297 4813	9.950 8306	106	50	
	20	9.653 3910	418	9.702 5711	523	0.297 4289	9.950 8200	106	40	
	30	9.653 4328	418	9.702 6234	524	0.297 3766	9.950 8094	106	30	
	40	9.653 4746	417	9.702 6758	524	0.297 3242	9.950 7988	107	20	
	50	9.653 5163	418	9.702 7282	523	0.297 2718	9.950 7881	106	10	
46	0	9.653 5581	417	9.702 7805	524	0.297 2195	9.950 7775	106	0	14
	10	9.653 5998	417	9.702 8329	524	0.297 1671	9.950 7669	106	50	
	20	9.653 6415	418	9.702 8853	523	0.297 1147	9.950 7563	106	40	
	30	9.653 6833	417	9.702 9376	524	0.297 0624	9.950 7457	107	30	
	40	9.653 7250	417	9.702 9900	523	0.297 0100	9.950 7350	106	20	
	50	9.653 7667	417	9.703 0423	523	0.296 9577	9.950 7244	106	10	
47	0	9.653 8084	417	9.703 0946	524	0.296 9054	9.950 7138	107	0	13
	10	9.653 8501	417	9.703 1470	523	0.296 8530	9.950 7031	106	50	
	20	9.653 8918	417	9.703 1993	523	0.296 8007	9.950 6925	106	40	
	30	9.653 9335	417	9.703 2516	524	0.296 7484	9.950 6819	106	30	
	40	9.653 9752	417	9.703 3040	523	0.296 6960	9.950 6713	107	20	
	50	9.654 0169	417	9.703 3563	523	0.296 6437	9.950 6606	106	10	
48	0	9.654 0586	417	9.703 4086	523	0.296 5914	9.950 6500	107	0	12
	10	9.654 1003	417	9.703 4609	523	0.296 5391	9.950 6393	106	50	
	20	9.654 1420	416	9.703 5132	524	0.296 4868	9.950 6287	106	40	
	30	9.654 1836	417	9.703 5656	523	0.296 4344	9.950 6181	107	30	
	40	9.654 2253	417	9.703 6179	523	0.296 3821	9.950 6074	106	20	
	50	9.654 2670	416	9.703 6702	523	0.296 3298	9.950 5968	107	10	
49	0	9.654 3086	417	9.703 7225	523	0.296 2775	9.950 5861	106	0	11
	10	9.654 3503	416	9.703 7748	522	0.296 2252	9.950 5755	106	50	
	20	9.654 3919	416	9.703 8270	523	0.296 1730	9.950 5649	107	40	
	30	9.654 4335	417	9.703 8793	523	0.296 1207	9.950 5542	106	30	
	40	9.654 4752	416	9.703 9316	523	0.296 0684	9.950 5436	107	20	
	50	9.654 5168	416	9.703 9839	523	0.296 0161	9.950 5329	106	10	
50	0	9.654 5584		9.704 0362		0.295 9638	9.950 5223		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

63°

26°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	
50	0	9.654 5584	416	9.704 0362	522	0.295 9638	9.950 5223	107	0	10
	10	9.654 6000	417	9.704 0884	523	0.295 9116	9.950 5116	106	50	
	20	9.654 6417	416	9.704 1407	523	0.295 8593	9.950 5010	107	40	
	30	9.654 6833	416	9.704 1930	522	0.295 8070	9.950 4903	107	30	
	40	9.654 7249	416	9.704 2452	523	0.295 7548	9.950 4796	106	20	
	50	9.654 7665	416	9.704 2975	522	0.295 7025	9.950 4690	107	10	
51	0	9.654 8081	416	9.704 3497	523	0.295 6503	9.950 4583	106	0	9
	10	9.654 8497	415	9.704 4020	522	0.295 5980	9.950 4477	107	50	
	20	9.654 8912	416	9.704 4542	523	0.295 5458	9.950 4370	107	40	
	30	9.654 9328	416	9.704 5065	522	0.295 4935	9.950 4263	106	30	
	40	9.654 9744	416	9.704 5587	522	0.295 4413	9.950 4157	107	20	
	50	9.655 0160	415	9.704 6109	523	0.295 3891	9.950 4050	106	10	
52	0	9.655 0575	416	9.704 6632	522	0.295 3368	9.950 3944	107	0	8
	10	9.655 0991	415	9.704 7154	522	0.295 2846	9.950 3837	107	50	
	20	9.655 1406	416	9.704 7676	522	0.295 2324	9.950 3730	106	40	
	30	9.655 1822	415	9.704 8198	523	0.295 1802	9.950 3624	107	30	
	40	9.655 2237	416	9.704 8721	522	0.295 1279	9.950 3517	107	20	
	50	9.655 2653	415	9.704 9243	522	0.295 0757	9.950 3410	107	10	
53	0	9.655 3068	415	9.704 9765	522	0.295 0235	9.950 3303	106	0	7
	10	9.655 3483	416	9.705 0287	522	0.294 9713	9.950 3197	107	50	
	20	9.655 3899	415	9.705 0809	522	0.294 9191	9.950 3090	107	40	
	30	9.655 4314	415	9.705 1331	522	0.294 8669	9.950 2983	107	30	
	40	9.655 4729	415	9.705 1853	522	0.294 8147	9.950 2876	107	20	
	50	9.655 5144	415	9.705 2375	522	0.294 7625	9.950 2769	106	10	
54	0	9.655 5559	415	9.705 2897	521	0.294 7103	9.950 2663	107	0	6
	10	9.655 5974	415	9.705 3418	522	0.294 6582	9.950 2556	107	50	
	20	9.655 6389	415	9.705 3940	522	0.294 6060	9.950 2449	107	40	
	30	9.655 6804	415	9.705 4462	522	0.294 5538	9.950 2342	107	30	
	40	9.655 7219	415	9.705 4984	521	0.294 5016	9.950 2235	107	20	
	50	9.655 7634	414	9.705 5505	522	0.294 4495	9.950 2128	106	10	
55	0	9.655 8048	415	9.705 6027	521	0.294 3973	9.950 2022	107	0	5
	10	9.655 8463	415	9.705 6548	522	0.294 3452	9.950 1915	107	50	
	20	9.655 8878	414	9.705 7070	522	0.294 2930	9.950 1808	107	40	
	30	9.655 9292	415	9.705 7592	521	0.294 2408	9.950 1701	107	30	
	40	9.655 9707	414	9.705 8113	521	0.294 1887	9.950 1594	107	20	
	50	9.656 0121	415	9.705 8634	522	0.294 1366	9.950 1487	107	10	
56	0	9.656 0536	414	9.705 9156	521	0.294 0844	9.950 1380	107	0	4
	10	9.656 0950	415	9.705 9677	522	0.294 0323	9.950 1273	107	50	
	20	9.656 1365	414	9.706 0199	521	0.293 9801	9.950 1166	107	40	
	30	9.656 1779	414	9.706 0720	521	0.293 9280	9.950 1059	107	30	
	40	9.656 2193	414	9.706 1241	521	0.293 8759	9.950 0952	107	20	
	50	9.656 2607	414	9.706 1762	522	0.293 8238	9.950 0845	107	10	
57	0	9.656 3021	415	9.706 2284	521	0.293 7716	9.950 0738	107	0	3
	10	9.656 3436	414	9.706 2805	521	0.293 7195	9.950 0631	107	50	
	20	9.656 3850	414	9.706 3326	521	0.293 6674	9.950 0524	107	40	
	30	9.656 4264	414	9.706 3847	521	0.293 6153	9.950 0417	107	30	
	40	9.656 4678	413	9.706 4368	521	0.293 5632	9.950 0310	108	20	
	50	9.656 5091	414	9.706 4889	521	0.293 5111	9.950 0202	107	10	
58	0	9.656 5505	414	9.706 5410	521	0.293 4590	9.950 0095	107	0	2
	10	9.656 5919	414	9.706 5931	521	0.293 4069	9.949 9988	107	50	
	20	9.656 6333	414	9.706 6452	521	0.293 3548	9.949 9881	107	40	
	30	9.656 6747	413	9.706 6973	521	0.293 3027	9.949 9774	107	30	
	40	9.656 7160	414	9.706 7494	520	0.293 2506	9.949 9667	108	20	
	50	9.656 7574	413	9.706 8014	521	0.293 1986	9.949 9559	107	10	
59	0	9.656 7987	414	9.706 8535	521	0.293 1465	9.949 9452	107	0	1
	10	9.656 8401	413	9.706 9056	520	0.293 0944	9.949 9345	107	50	
	20	9.656 8814	414	9.706 9576	521	0.293 0424	9.949 9238	107	40	
	30	9.656 9228	413	9.707 0097	521	0.292 9903	9.949 9131	108	30	
	40	9.656 9641	413	9.707 0618	520	0.292 9382	9.949 9023	107	20	
	50	9.657 0054	414	9.707 1138	521	0.292 8862	9.949 8916	107	10	
60	0	9.657 0468		9.707 1659		0.292 8341	9.949 8809		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

63°

522	
1	52.2
2	104.4
3	156.6
4	208.8
5	261.0
6	313.2
7	365.4
8	417.6
9	469.8

521	
1	52.1
2	104.2
3	156.3
4	208.4
5	260.5
6	312.6
7	364.7
8	416.8
9	468.9

416	
1	41.6
2	83.2
3	124.8
4	166.4
5	208.0
6	249.6
7	291.2
8	332.8
9	374.4

415	
1	41.5
2	83.0
3	124.5
4	166.0
5	207.5
6	249.0
7	290.5
8	332.0
9	373.5

414	
1	41.4
2	82.8
3	124.2
4	165.6
5	207.0
6	248.4
7	289.8
8	331.2
9	372.6

107	
1	10.7
2	21.4
3	32.1
4	42.8
5	53.5
6	64.2
7	74.9
8	85.6
9	96.3

27°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.657 0468	413	9.707 1659	520	0.292 8341	9.949 8809	107	0	60
	10	9.657 0881	413	9.707 2179	521	0.292 7821	9.949 8702	108	50	
	20	9.657 1294	413	9.707 2700	520	0.292 7300	9.949 8594	107	40	
	30	9.657 1707	413	9.707 3220	521	0.292 6780	9.949 8487	107	30	
	40	9.657 2120	413	9.707 3741	520	0.292 6259	9.949 8380	108	20	
	50	9.657 2533	413	9.707 4261	520	0.292 5739	9.949 8272	107	10	
1	0	9.657 2946	413	9.707 4781	521	0.292 5219	9.949 8165	107	0	59
	10	9.657 3359	413	9.707 5302	520	0.292 4698	9.949 8058	108	50	
	20	9.657 3772	413	9.707 5822	520	0.292 4178	9.949 7950	107	40	
	30	9.657 4185	412	9.707 6342	520	0.292 3658	9.949 7843	108	30	
	40	9.657 4597	413	9.707 6862	520	0.292 3138	9.949 7735	107	20	
	50	9.657 5010	413	9.707 7382	520	0.292 2618	9.949 7628	107	10	
2	0	9.657 5423	412	9.707 7902	520	0.292 2098	9.949 7521	108	0	58
	10	9.657 5835	413	9.707 8422	520	0.292 1578	9.949 7413	107	50	
	20	9.657 6248	413	9.707 8942	520	0.292 1058	9.949 7306	108	40	
	30	9.657 6661	412	9.707 9462	520	0.292 0538	9.949 7198	107	30	
	40	9.657 7073	412	9.707 9982	520	0.292 0018	9.949 7091	108	20	
	50	9.657 7485	413	9.708 0502	520	0.291 9498	9.949 6983	107	10	
3	0	9.657 7898	412	9.708 1022	520	0.291 8978	9.949 6876	108	0	57
	10	9.657 8310	412	9.708 1542	520	0.291 8458	9.949 6768	107	50	
	20	9.657 8722	413	9.708 2062	520	0.291 7938	9.949 6661	108	40	
	30	9.657 9135	412	9.708 2582	519	0.291 7418	9.949 6553	107	30	
	40	9.657 9547	412	9.708 3101	520	0.291 6899	9.949 6446	108	20	
	50	9.657 9959	412	9.708 3621	520	0.291 6379	9.949 6338	108	10	
4	0	9.658 0371	412	9.708 4141	519	0.291 5859	9.949 6230	107	0	56
	10	9.658 0783	412	9.708 4660	520	0.291 5340	9.949 6123	108	50	
	20	9.658 1195	412	9.708 5180	519	0.291 4820	9.949 6015	107	40	
	30	9.658 1607	412	9.708 5699	520	0.291 4301	9.949 5908	108	30	
	40	9.658 2019	412	9.708 6219	519	0.291 3781	9.949 5800	108	20	
	50	9.658 2431	411	9.708 6738	520	0.291 3262	9.949 5692	107	10	
5	0	9.658 2842	412	9.708 7258	519	0.291 2742	9.949 5585	108	0	55
	10	9.658 3254	412	9.708 7777	520	0.291 2223	9.949 5477	108	50	
	20	9.658 3666	411	9.708 8297	519	0.291 1703	9.949 5369	107	40	
	30	9.658 4077	412	9.708 8816	519	0.291 1184	9.949 5262	108	30	
	40	9.658 4489	411	9.708 9335	519	0.291 0665	9.949 5154	108	20	
	50	9.658 4900	412	9.708 9854	520	0.291 0146	9.949 5046	108	10	
6	0	9.658 5312	411	9.709 0374	519	0.290 9626	9.949 4938	107	0	54
	10	9.658 5723	412	9.709 0893	519	0.290 9107	9.949 4831	108	50	
	20	9.658 6135	411	9.709 1412	519	0.290 8588	9.949 4723	108	40	
	30	9.658 6546	411	9.709 1931	519	0.290 8069	9.949 4615	108	30	
	40	9.658 6957	412	9.709 2450	519	0.290 7550	9.949 4507	108	20	
	50	9.658 7369	411	9.709 2969	519	0.290 7031	9.949 4399	107	10	
7	0	9.658 7780	411	9.709 3488	519	0.290 6512	9.949 4292	108	0	53
	10	9.658 8191	411	9.709 4007	519	0.290 5993	9.949 4184	108	50	
	20	9.658 8602	411	9.709 4526	519	0.290 5474	9.949 4076	108	40	
	30	9.658 9013	411	9.709 5045	519	0.290 4955	9.949 3968	108	30	
	40	9.658 9424	411	9.709 5564	519	0.290 4436	9.949 3860	108	20	
	50	9.658 9835	411	9.709 6083	518	0.290 3917	9.949 3752	107	10	
8	0	9.659 0246	411	9.709 6601	519	0.290 3399	9.949 3645	108	0	52
	10	9.659 0657	411	9.709 7120	519	0.290 2880	9.949 3537	108	50	
	20	9.659 1068	410	9.709 7639	519	0.290 2361	9.949 3429	108	40	
	30	9.659 1478	411	9.709 8158	518	0.290 1842	9.949 3321	108	30	
	40	9.659 1889	411	9.709 8676	519	0.290 1324	9.949 3213	108	20	
	50	9.659 2300	410	9.709 9195	518	0.290 0805	9.949 3105	108	10	
9	0	9.659 2710	411	9.709 9713	519	0.290 0287	9.949 2997	108	0	51
	10	9.659 3121	410	9.710 0232	518	0.289 9768	9.949 2889	108	50	
	20	9.659 3531	411	9.710 0750	519	0.289 9250	9.949 2781	108	40	
	30	9.659 3942	410	9.710 1269	518	0.289 8731	9.949 2673	108	30	
	40	9.659 4352	410	9.710 1787	519	0.289 8213	9.949 2565	108	20	
	50	9.659 4762	411	9.710 2306	518	0.289 7694	9.949 2457	108	10	
10	0	9.659 5173		9.710 2824		0.289 7176	9.949 2349		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

62°

520	
1	52.0
2	104.0
3	156.0
4	208.0
5	260.0
6	312.0
7	364.0
8	416.0
9	468.0

519	
1	51.9
2	103.8
3	155.7
4	207.6
5	259.5
6	311.4
7	363.3
8	415.2
9	467.1

518	
1	51.8
2	103.6
3	155.4
4	207.2
5	259.0
6	310.8
7	362.6
8	414.4
9	466.2

413	
1	41.3
2	82.6
3	123.9
4	165.2
5	206.5
6	247.8
7	289.1
8	330.4
9	371.7

412	
1	41.2
2	82.4
3	123.6
4	164.8
5	206.0
6	247.2
7	288.4
8	329.6
9	370.8

108	
1	10.8
2	21.6
3	32.4
4	43.2
5	54.0
6	64.8
7	75.6
8	86.4
9	97.2

27°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.659 5173	410	9.710 2824	518	0.289 7176	9.949 2349	108	0	50
	10	9.659 5583	410	9.710 3342	519	0.289 6658	9.949 2241	108	50	
	20	9.659 5993	410	9.710 3861	518	0.289 6139	9.949 2133	108	40	
	30	9.659 6403	410	9.710 4379	518	0.289 5621	9.949 2025	109	30	
	40	9.659 6813	410	9.710 4897	518	0.289 5103	9.949 1916	108	20	
	50	9.659 7223	410	9.710 5415	518	0.289 4585	9.949 1808	108	10	
11	0	9.659 7633	410	9.710 5933	518	0.289 4067	9.949 1700	108	0	49
	10	9.659 8043	410	9.710 6451	518	0.289 3549	9.949 1592	108	50	
	20	9.659 8453	410	9.710 6969	518	0.289 3031	9.949 1484	108	40	
	30	9.659 8863	410	9.710 7487	518	0.289 2513	9.949 1376	108	30	
	40	9.659 9273	410	9.710 8005	518	0.289 1995	9.949 1268	109	20	
	50	9.659 9683	410	9.710 8523	518	0.289 1477	9.949 1159	108	10	
12	0	9.660 0093	409	9.710 9041	518	0.289 0959	9.949 1051	108	0	48
	10	9.660 0502	410	9.710 9559	518	0.289 0441	9.949 0943	108	50	
	20	9.660 0912	409	9.711 0077	518	0.288 9923	9.949 0835	108	40	
	30	9.660 1321	410	9.711 0595	518	0.288 9405	9.949 0727	109	30	
	40	9.660 1731	409	9.711 1113	517	0.288 8887	9.949 0618	108	20	
	50	9.660 2140	410	9.711 1630	518	0.288 8370	9.949 0510	108	10	
13	0	9.660 2550	409	9.711 2148	518	0.288 7852	9.949 0402	109	0	47
	10	9.660 2959	409	9.711 2666	517	0.288 7334	9.949 0293	108	50	
	20	9.660 3368	410	9.711 3183	518	0.288 6817	9.949 0185	108	40	
	30	9.660 3778	409	9.711 3701	518	0.288 6299	9.949 0077	109	30	
	40	9.660 4187	409	9.711 4219	517	0.288 5781	9.948 9968	108	20	
	50	9.660 4596	409	9.711 4736	518	0.288 5264	9.948 9860	108	10	
14	0	9.660 5005	409	9.711 5254	517	0.288 4746	9.948 9752	109	0	46
	10	9.660 5414	409	9.711 5771	517	0.288 4229	9.948 9643	108	50	
	20	9.660 5823	409	9.711 6288	518	0.288 3712	9.948 9535	108	40	
	30	9.660 6232	409	9.711 6806	517	0.288 3194	9.948 9427	109	30	
	40	9.660 6641	409	9.711 7323	517	0.288 2677	9.948 9318	108	20	
	50	9.660 7050	409	9.711 7840	518	0.288 2160	9.948 9210	109	10	
15	0	9.660 7459	409	9.711 8358	517	0.288 1642	9.948 9101	108	0	45
	10	9.660 7868	409	9.711 8875	517	0.288 1125	9.948 8993	109	50	
	20	9.660 8277	408	9.711 9392	517	0.288 0608	9.948 8884	108	40	
	30	9.660 8685	409	9.711 9909	517	0.288 0091	9.948 8776	109	30	
	40	9.660 9094	408	9.712 0426	517	0.287 9574	9.948 8667	108	20	
	50	9.660 9502	409	9.712 0943	518	0.287 9057	9.948 8559	109	10	
16	0	9.660 9911	409	9.712 1461	517	0.287 8539	9.948 8450	108	0	44
	10	9.661 0320	408	9.712 1978	517	0.287 8022	9.948 8342	109	50	
	20	9.661 0728	408	9.712 2495	517	0.287 7505	9.948 8233	108	40	
	30	9.661 1136	409	9.712 3012	516	0.287 6988	9.948 8125	109	30	
	40	9.661 1545	408	9.712 3528	517	0.287 6472	9.948 8016	108	20	
	50	9.661 1953	408	9.712 4045	517	0.287 5955	9.948 7908	109	10	
17	0	9.661 2361	408	9.712 4562	517	0.287 5438	9.948 7799	108	0	43
	10	9.661 2769	409	9.712 5079	517	0.287 4921	9.948 7691	109	50	
	20	9.661 3178	408	9.712 5596	516	0.287 4404	9.948 7582	109	40	
	30	9.661 3586	408	9.712 6112	517	0.287 3888	9.948 7473	108	30	
	40	9.661 3994	408	9.712 6629	517	0.287 3371	9.948 7365	109	20	
	50	9.661 4402	408	9.712 7146	516	0.287 2854	9.948 7256	109	10	
18	0	9.661 4810	408	9.712 7662	517	0.287 2338	9.948 7147	108	0	42
	10	9.661 5218	408	9.712 8179	517	0.287 1821	9.948 7039	109	50	
	20	9.661 5626	407	9.712 8696	516	0.287 1304	9.948 6930	109	40	
	30	9.661 6033	408	9.712 9212	517	0.287 0788	9.948 6821	108	30	
	40	9.661 6441	408	9.712 9729	516	0.287 0271	9.948 6713	109	20	
	50	9.661 6849	408	9.713 0245	516	0.286 9755	9.948 6604	109	10	
19	0	9.661 7257	407	9.713 0761	517	0.286 9239	9.948 6495	109	0	41
	10	9.661 7664	408	9.713 1278	516	0.286 8722	9.948 6386	108	50	
	20	9.661 8072	407	9.713 1794	517	0.286 8206	9.948 6278	109	40	
	30	9.661 8479	408	9.713 2311	516	0.286 7689	9.948 6169	109	30	
	40	9.661 8887	407	9.713 2827	516	0.286 7173	9.948 6060	109	20	
	50	9.661 9294	408	9.713 3343	516	0.286 6657	9.948 5951	109	10	
20	0	9.661 9702		9.713 3859		0.286 6141	9.948 5842		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin.	d.	″	′

62°

517	
1	51.7
2	103.4
3	155.1
4	206.8
5	258.5
6	310.2
7	361.9
8	413.6
9	465.3

516	
1	51.6
2	103.2
3	154.8
4	206.4
5	258.0
6	309.6
7	361.2
8	412.8
9	464.4

411	
1	41.1
2	82.2
3	123.3
4	164.4
5	205.5
6	246.6
7	287.7
8	328.8
9	369.9

409	
1	40.9
2	81.8
3	122.7
4	163.6
5	204.5
6	245.4
7	286.3
8	327.2
9	368.1

408	
1	40.8
2	81.6
3	122.4
4	163.2
5	204.0
6	244.8
7	285.6
8	326.4
9	367.2

109	
1	10.9
2	21.8
3	32.7
4	43.6
5	54.5
6	65.4
7	76.3
8	87.2
9	98.1

27°

516	
1	51.6
2	103.2
3	154.8
4	206.4
5	258.0
6	309.6
7	361.2
8	412.8
9	464.4

515	
1	51.5
2	103.0
3	154.5
4	206.0
5	257.5
6	309.0
7	360.5
8	412.0
9	463.5

514	
1	51.4
2	102.8
3	154.2
4	205.6
5	257.0
6	308.4
7	359.8
8	411.2
9	462.6

407	
1	40.7
2	81.4
3	122.1
4	162.8
5	203.5
6	244.2
7	284.9
8	325.6
9	366.3

406	
1	40.6
2	81.2
3	121.8
4	162.4
5	203.0
6	243.6
7	284.2
8	324.8
9	365.4

109	
1	10.9
2	21.8
3	32.7
4	43.6
5	54.5
6	65.4
7	76.3
8	87.2
9	98.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.661 9702	407	9.713 3859	516	0.286 6141	9.948 5842	109	0	40
	10	9.662 0109	407	9.713 4375	517	0.286 5625	9.948 5733	108	50	
	20	9.662 0516	407	9.713 4892	516	0.286 5108	9.948 5625	109	40	
	30	9.662 0923	408	9.713 5408	516	0.286 4592	9.948 5516	109	30	
	40	9.662 1331	407	9.713 5924	516	0.286 4076	9.948 5407	109	20	
	50	9.662 1738	407	9.713 6440	516	0.286 3560	9.948 5298	109	10	
21	0	9.662 2145	407	9.713 6956	516	0.286 3044	9.948 5189	109	0	39
	10	9.662 2552	407	9.713 7472	516	0.286 2528	9.948 5080	109	50	
	20	9.662 2959	407	9.713 7988	515	0.286 2012	9.948 4971	109	40	
	30	9.662 3366	407	9.713 8503	516	0.286 1497	9.948 4862	109	30	
	40	9.662 3773	406	9.713 9019	516	0.286 0981	9.948 4753	109	20	
	50	9.662 4179	407	9.713 9535	516	0.286 0465	9.948 4644	109	10	
22	0	9.662 4586	407	9.714 0051	516	0.285 9949	9.948 4535	109	0	38
	10	9.662 4993	407	9.714 0567	515	0.285 9433	9.948 4426	109	50	
	20	9.662 5400	406	9.714 1082	516	0.285 8918	9.948 4317	109	40	
	30	9.662 5806	407	9.714 1598	516	0.285 8402	9.948 4208	109	30	
	40	9.662 6213	407	9.714 2114	515	0.285 7886	9.948 4099	109	20	
	50	9.662 6620	406	9.714 2629	516	0.285 7371	9.948 3990	109	10	
23	0	9.662 7026	407	9.714 3145	515	0.285 6855	9.948 3881	109	0	37
	10	9.662 7433	406	9.714 3660	516	0.285 6340	9.948 3772	109	50	
	20	9.662 7839	406	9.714 4176	515	0.285 5824	9.948 3663	109	40	
	30	9.662 8245	407	9.714 4691	516	0.285 5309	9.948 3554	109	30	
	40	9.662 8652	406	9.714 5207	515	0.285 4793	9.948 3445	109	20	
	50	9.662 9058	406	9.714 5722	515	0.285 4278	9.948 3336	109	10	
24	0	9.662 9464	406	9.714 6237	516	0.285 3763	9.948 3227	109	0	36
	10	9.662 9870	406	9.714 6753	515	0.285 3247	9.948 3118	110	50	
	20	9.663 0276	406	9.714 7268	515	0.285 2732	9.948 3008	109	40	
	30	9.663 0682	407	9.714 7783	516	0.285 2217	9.948 2899	109	30	
	40	9.663 1089	405	9.714 8299	515	0.285 1701	9.948 2790	109	20	
	50	9.663 1494	406	9.714 8814	515	0.285 1186	9.948 2681	109	10	
25	0	9.663 1900	406	9.714 9329	515	0.285 0671	9.948 2572	110	0	35
	10	9.663 2306	406	9.714 9844	515	0.285 0156	9.948 2462	109	50	
	20	9.663 2712	406	9.715 0359	515	0.284 9641	9.948 2353	109	40	
	30	9.663 3118	406	9.715 0874	515	0.284 9126	9.948 2244	109	30	
	40	9.663 3524	405	9.715 1389	515	0.284 8611	9.948 2135	110	20	
	50	9.663 3929	406	9.715 1904	515	0.284 8096	9.948 2025	109	10	
26	0	9.663 4335	406	9.715 2419	515	0.284 7581	9.948 1916	109	0	34
	10	9.663 4741	405	9.715 2934	515	0.284 7066	9.948 1807	110	50	
	20	9.663 5146	406	9.715 3449	515	0.284 6551	9.948 1697	109	40	
	30	9.663 5552	405	9.715 3964	514	0.284 6036	9.948 1588	109	30	
	40	9.663 5957	405	9.715 4478	515	0.284 5522	9.948 1479	110	20	
	50	9.663 6362	406	9.715 4993	515	0.284 5007	9.948 1369	109	10	
27	0	9.663 6768	405	9.715 5508	514	0.284 4492	9.948 1260	109	0	33
	10	9.663 7173	405	9.715 6022	515	0.284 3978	9.948 1151	110	50	
	20	9.663 7578	406	9.715 6537	515	0.284 3463	9.948 1041	109	40	
	30	9.663 7984	405	9.715 7052	514	0.284 2948	9.948 0932	110	30	
	40	9.663 8389	405	9.715 7566	515	0.284 2434	9.948 0822	109	20	
	50	9.663 8794	405	9.715 8081	514	0.284 1919	9.948 0713	109	10	
28	0	9.663 9199	405	9.715 8595	515	0.284 1405	9.948 0604	110	0	32
	10	9.663 9604	405	9.715 9110	514	0.284 0890	9.948 0494	109	50	
	20	9.664 0009	405	9.715 9624	515	0.284 0376	9.948 0385	110	40	
	30	9.664 0414	405	9.716 0139	514	0.283 9861	9.948 0275	109	30	
	40	9.664 0819	405	9.716 0653	514	0.283 9347	9.948 0166	110	20	
	50	9.664 1224	404	9.716 1167	515	0.283 8833	9.948 0056	109	10	
29	0	9.664 1628	405	9.716 1682	514	0.283 8318	9.947 9947	110	0	31
	10	9.664 2033	405	9.716 2196	514	0.283 7804	9.947 9837	109	50	
	20	9.664 2438	404	9.716 2710	514	0.283 7290	9.947 9728	110	40	
	30	9.664 2842	405	9.716 3224	515	0.283 6776	9.947 9618	110	30	
	40	9.664 3247	405	9.716 3739	514	0.283 6261	9.947 9508	109	20	
	50	9.664 3652	404	9.716 4253	514	0.283 5747	9.947 9399	110	10	
30	0	9.664 4056		9.716 4767		0.283 5233	9.947 9289		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin.	d.	″	′

62°

27°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.664 4056	404	9.716 4767	514	0.283 5233	9.947 9289	109	0	30
	10	9.664 4460	405	9.716 5281	514	0.283 4719	9.947 9180	110	50	
	20	9.664 4865	404	9.716 5795	514	0.283 4205	9.947 9070	110	40	
	30	9.664 5269	404	9.716 6309	514	0.283 3691	9.947 8960	109	30	
	40	9.664 5673	405	9.716 6823	514	0.283 3177	9.947 8851	110	20	
	50	9.664 6078	404	9.716 7337	514	0.283 2663	9.947 8741	110	10	
31	0	9.664 6482	404	9.716 7851	513	0.283 2149	9.947 8631	109	0	29
	10	9.664 6886	404	9.716 8364	514	0.283 1636	9.947 8522	110	50	
	20	9.664 7290	404	9.716 8878	514	0.283 1122	9.947 8412	110	40	
	30	9.664 7694	404	9.716 9392	514	0.283 0608	9.947 8302	109	30	
	40	9.664 8098	404	9.716 9906	513	0.283 0094	9.947 8193	110	20	
	50	9.664 8502	404	9.717 0419	514	0.282 9581	9.947 8083	110	10	
32	0	9.664 8906	404	9.717 0933	514	0.282 9067	9.947 7973	110	0	28
	10	9.664 9310	404	9.717 1447	513	0.282 8553	9.947 7863	110	50	
	20	9.664 9714	404	9.717 1960	514	0.282 8040	9.947 7753	109	40	
	30	9.665 0118	403	9.717 2474	513	0.282 7526	9.947 7644	110	30	
	40	9.665 0521	404	9.717 2987	514	0.282 7013	9.947 7534	110	20	
	50	9.665 0925	404	9.717 3501	513	0.282 6499	9.947 7424	110	10	
33	0	9.665 1329	403	9.717 4014	514	0.282 5986	9.947 7314	110	0	27
	10	9.665 1732	404	9.717 4528	513	0.282 5472	9.947 7204	109	50	
	20	9.665 2136	403	9.717 5041	514	0.282 4959	9.947 7095	110	40	
	30	9.665 2539	404	9.717 5555	513	0.282 4445	9.947 6985	110	30	
	40	9.665 2943	403	9.717 6068	513	0.282 3932	9.947 6875	110	20	
	50	9.665 3346	403	9.717 6581	513	0.282 3419	9.947 6765	110	10	
34	0	9.665 3749	404	9.717 7094	514	0.282 2906	9.947 6655	110	0	26
	10	9.665 4153	403	9.717 7608	513	0.282 2392	9.947 6545	110	50	
	20	9.665 4556	403	9.717 8121	513	0.282 1879	9.947 6435	110	40	
	30	9.665 4959	403	9.717 8634	513	0.282 1366	9.947 6325	110	30	
	40	9.665 5362	403	9.717 9147	513	0.282 0853	9.947 6215	110	20	
	50	9.665 5765	403	9.717 9660	513	0.282 0340	9.947 6105	110	10	
35	0	9.665 6168	403	9.718 0173	513	0.281 9827	9.947 5995	110	0	25
	10	9.665 6571	403	9.718 0686	513	0.281 9314	9.947 5885	110	50	
	20	9.665 6974	403	9.718 1199	513	0.281 8801	9.947 5775	110	40	
	30	9.665 7377	403	9.718 1712	513	0.281 8288	9.947 5665	110	30	
	40	9.665 7780	403	9.718 2225	513	0.281 7775	9.947 5555	110	20	
	50	9.665 8183	403	9.718 2738	513	0.281 7262	9.947 5445	110	10	
36	0	9.665 8586	403	9.718 3251	513	0.281 6749	9.947 5335	110	0	24
	10	9.665 8989	402	9.718 3764	512	0.281 6236	9.947 5225	110	50	
	20	9.665 9391	403	9.718 4276	513	0.281 5724	9.947 5115	110	40	
	30	9.665 9794	402	9.718 4789	513	0.281 5211	9.947 5005	110	30	
	40	9.666 0196	403	9.718 5302	513	0.281 4698	9.947 4895	111	20	
	50	9.666 0599	402	9.718 5815	512	0.281 4185	9.947 4784	110	10	
37	0	9.666 1001	403	9.718 6327	513	0.281 3673	9.947 4674	110	0	23
	10	9.666 1404	402	9.718 6840	512	0.281 3160	9.947 4564	110	50	
	20	9.666 1806	403	9.718 7352	513	0.281 2648	9.947 4454	110	40	
	30	9.666 2209	402	9.718 7865	512	0.281 2135	9.947 4344	110	30	
	40	9.666 2611	402	9.718 8377	513	0.281 1623	9.947 4234	111	20	
	50	9.666 3013	402	9.718 8890	512	0.281 1110	9.947 4123	110	10	
38	0	9.666 3415	403	9.718 9402	513	0.281 0598	9.947 4013	110	0	22
	10	9.666 3818	402	9.718 9915	512	0.281 0085	9.947 3903	110	50	
	20	9.666 4220	402	9.719 0427	512	0.280 9573	9.947 3793	111	40	
	30	9.666 4622	402	9.719 0939	513	0.280 9061	9.947 3682	110	30	
	40	9.666 5024	402	9.719 1452	512	0.280 8548	9.947 3572	110	20	
	50	9.666 5426	402	9.719 1964	512	0.280 8036	9.947 3462	110	10	
39	0	9.666 5828	401	9.719 2476	512	0.280 7524	9.947 3352	111	0	21
	10	9.666 6229	402	9.719 2988	512	0.280 7012	9.947 3241	110	50	
	20	9.666 6631	402	9.719 3500	513	0.280 6500	9.947 3131	110	40	
	30	9.666 7033	402	9.719 4013	512	0.280 5987	9.947 3021	111	30	
	40	9.666 7435	401	9.719 4525	512	0.280 5475	9.947 2910	110	20	
	50	9.666 7836	402	9.719 5037	512	0.280 4963	9.947 2800	111	10	
40	0	9.666 8238		9.719 5549		0.280 4451	9.947 2689		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

62°

513	
1	51.3
2	102.6
3	153.9
4	205.2
5	256.5
6	307.8
7	359.1
8	410.4
9	461.7

512	
1	51.2
2	102.4
3	153.6
4	204.8
5	256.0
6	307.2
7	358.4
8	409.6
9	460.8

405	
1	40.5
2	81.0
3	121.5
4	162.0
5	202.5
6	243.0
7	283.5
8	324.0
9	364.5

404	
1	40.4
2	80.8
3	121.2
4	161.6
5	202.0
6	242.4
7	282.8
8	323.2
9	363.6

403	
1	40.3
2	80.6
3	120.9
4	161.2
5	201.5
6	241.8
7	282.1
8	322.4
9	362.7

110	
1	11.0
2	22.0
3	33.0
4	44.0
5	55.0
6	66.0
7	77.0
8	88.0
9	99.0

27°

512	
1	51.2
2	102.4
3	153.6
4	204.8
5	256.0
6	307.2
7	358.4
8	409.6
9	460.8

511	
1	51.1
2	102.2
3	153.3
4	204.4
5	255.5
6	306.6
7	357.7
8	408.8
9	459.9

510	
1	51.0
2	102.0
3	153.0
4	204.0
5	255.0
6	306.0
7	357.0
8	408.0
9	459.0

401	
1	40.1
2	80.2
3	120.3
4	160.4
5	200.5
6	240.6
7	280.7
8	320.8
9	360.9

399	
1	39.9
2	79.8
3	119.7
4	159.6
5	199.5
6	239.4
7	279.3
8	319.2
9	359.1

111	
1	11.1
2	22.2
3	33.3
4	44.4
5	55.5
6	66.6
7	77.7
8	88.8
9	99.9

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.666 8238	402	9.719 5549	512	0.280 4451	9.947 2689	110	0	20
	10	9.666 8640	401	9.719 6061	512	0.280 3939	9.947 2579	110	50	
	20	9.666 9041	402	9.719 6573	511	0.280 3427	9.947 2469	111	40	
	30	9.666 9443	401	9.719 7084	512	0.280 2916	9.947 2358	110	30	
	40	9.666 9844	402	9.719 7596	512	0.280 2404	9.947 2248	111	20	
	50	9.667 0246	401	9.719 8108	512	0.280 1892	9.947 2137	110	10	
41	0	9.667 0647	401	9.719 8620	512	0.280 1380	9.947 2027	111	0	19
	10	9.667 1048	401	9.719 9132	512	0.280 0868	9.947 1916	110	50	
	20	9.667 1449	402	9.719 9644	511	0.280 0356	9.947 1806	111	40	
	30	9.667 1851	401	9.720 0155	512	0.279 9845	9.947 1695	110	30	
	40	9.667 2252	401	9.720 0667	512	0.279 9333	9.947 1585	111	20	
	50	9.667 2653	401	9.720 1179	511	0.279 8821	9.947 1474	110	10	
42	0	9.667 3054	401	9.720 1690	512	0.279 8310	9.947 1364	111	0	18
	10	9.667 3455	401	9.720 2202	511	0.279 7798	9.947 1253	110	50	
	20	9.667 3856	401	9.720 2713	512	0.279 7287	9.947 1143	111	40	
	30	9.667 4257	401	9.720 3225	511	0.279 6775	9.947 1032	110	30	
	40	9.667 4658	401	9.720 3736	512	0.279 6264	9.947 0922	111	20	
	50	9.667 5059	400	9.720 4248	511	0.279 5752	9.947 0811	111	10	
43	0	9.667 5459	401	9.720 4759	511	0.279 5241	9.947 0700	110	0	17
	10	9.667 5860	401	9.720 5270	512	0.279 4730	9.947 0590	111	50	
	20	9.667 6261	401	9.720 5782	511	0.279 4218	9.947 0479	110	40	
	30	9.667 6662	400	9.720 6293	511	0.279 3707	9.947 0369	111	30	
	40	9.667 7062	401	9.720 6804	511	0.279 3196	9.947 0258	111	20	
	50	9.667 7463	400	9.720 7315	512	0.279 2685	9.947 0147	111	10	
44	0	9.667 7863	401	9.720 7827	511	0.279 2173	9.947 0036	110	0	16
	10	9.667 8264	400	9.720 8338	511	0.279 1662	9.946 9926	111	50	
	20	9.667 8664	400	9.720 8849	511	0.279 1151	9.946 9815	111	40	
	30	9.667 9064	401	9.720 9360	511	0.279 0640	9.946 9704	110	30	
	40	9.667 9465	400	9.720 9871	511	0.279 0129	9.946 9594	111	20	
	50	9.667 9865	400	9.721 0382	511	0.278 9618	9.946 9483	111	10	
45	0	9.668 0265	400	9.721 0893	511	0.278 9107	9.946 9372	111	0	15
	10	9.668 0665	400	9.721 1404	511	0.278 8596	9.946 9261	111	50	
	20	9.668 1065	401	9.721 1915	511	0.278 8085	9.946 9150	110	40	
	30	9.668 1466	400	9.721 2426	511	0.278 7574	9.946 9040	111	30	
	40	9.668 1866	400	9.721 2937	511	0.278 7063	9.946 8929	111	20	
	50	9.668 2266	399	9.721 3448	510	0.278 6552	9.946 8818	111	10	
46	0	9.668 2665	400	9.721 3958	511	0.278 6042	9.946 8707	111	0	14
	10	9.668 3065	400	9.721 4469	511	0.278 5531	9.946 8596	111	50	
	20	9.668 3465	400	9.721 4980	510	0.278 5020	9.946 8485	110	40	
	30	9.668 3865	400	9.721 5490	511	0.278 4510	9.946 8375	111	30	
	40	9.668 4265	399	9.721 6001	511	0.278 3999	9.946 8264	111	20	
	50	9.668 4664	400	9.721 6512	510	0.278 3488	9.946 8153	111	10	
47	0	9.668 5064	400	9.721 7022	511	0.278 2978	9.946 8042	111	0	13
	10	9.668 5464	399	9.721 7533	510	0.278 2467	9.946 7931	111	50	
	20	9.668 5863	400	9.721 8043	511	0.278 1957	9.946 7820	111	40	
	30	9.668 6263	399	9.721 8554	510	0.278 1446	9.946 7709	111	30	
	40	9.668 6662	400	9.721 9064	511	0.278 0936	9.946 7598	111	20	
	50	9.668 7062	399	9.721 9575	510	0.278 0425	9.946 7487	111	10	
48	0	9.668 7461	399	9.722 0085	510	0.277 9915	9.946 7376	111	0	12
	10	9.668 7860	400	9.722 0595	511	0.277 9405	9.946 7265	111	50	
	20	9.668 8260	399	9.722 1106	510	0.277 8894	9.946 7154	111	40	
	30	9.668 8659	399	9.722 1616	510	0.277 8384	9.946 7043	111	30	
	40	9.668 9058	399	9.722 2126	510	0.277 7874	9.946 6932	111	20	
	50	9.668 9457	399	9.722 2636	511	0.277 7364	9.946 6821	111	10	
49	0	9.668 9856	399	9.722 3147	510	0.277 6853	9.946 6710	111	0	11
	10	9.669 0255	399	9.722 3657	510	0.277 6343	9.946 6599	112	50	
	20	9.669 0654	399	9.722 4167	510	0.277 5833	9.946 6487	111	40	
	30	9.669 1053	399	9.722 4677	510	0.277 5323	9.946 6376	111	30	
	40	9.669 1452	399	9.722 5187	510	0.277 4813	9.946 6265	111	20	
	50	9.669 1851	399	9.722 5697	510	0.277 4303	9.946 6154	111	10	
50	0	9.669 2250		9.722 6207		0.277 3793	9.946 6043		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

62°

27°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.669 2250	399	9.722 6207	510	0.277 3793	9.946 6043	111	0	10
	10	9.669 2649	398	9.722 6717	510	0.277 3283	9.946 5932	111	50	
	20	9.669 3047	399	9.722 7227	510	0.277 2773	9.946 5821	112	40	
	30	9.669 3446	399	9.722 7737	509	0.277 2263	9.946 5709	111	30	
	40	9.669 3845	398	9.722 8246	510	0.277 1754	9.946 5598	111	20	
	50	9.669 4243	399	9.722 8756	510	0.277 1244	9.946 5487	111	10	
51	0	9.669 4642	398	9.722 9266	510	0.277 0734	9.946 5376	112	0	9
	10	9.669 5040	399	9.722 9776	509	0.277 0224	9.946 5264	111	50	
	20	9.669 5439	398	9.723 0285	510	0.276 9715	9.946 5153	111	40	
	30	9.669 5837	398	9.723 0795	510	0.276 9205	9.946 5042	111	30	
	40	9.669 6235	399	9.723 1305	509	0.276 8695	9.946 4931	112	20	
	50	9.669 6634	398	9.723 1814	510	0.276 8186	9.946 4819	111	10	
52	0	9.669 7032	398	9.723 2324	509	0.276 7676	9.946 4708	111	0	8
	10	9.669 7430	398	9.723 2833	510	0.276 7167	9.946 4597	112	50	
	20	9.669 7828	398	9.723 3343	509	0.276 6657	9.946 4485	111	40	
	30	9.669 8226	398	9.723 3852	510	0.276 6148	9.946 4374	111	30	
	40	9.669 8624	398	9.723 4362	509	0.276 5638	9.946 4263	112	20	
	50	9.669 9022	398	9.723 4871	510	0.276 5129	9.946 4151	111	10	
53	0	9.669 9420	398	9.723 5381	509	0.276 4619	9.946 4040	112	0	7
	10	9.669 9818	398	9.723 5890	509	0.276 4110	9.946 3928	111	50	
	20	9.670 0216	398	9.723 6399	510	0.276 3601	9.946 3817	112	40	
	30	9.670 0614	398	9.723 6909	509	0.276 3091	9.946 3705	111	30	
	40	9.670 1012	397	9.723 7418	509	0.276 2582	9.946 3594	111	20	
	50	9.670 1409	398	9.723 7927	509	0.276 2073	9.946 3483	112	10	
54	0	9.670 1807	398	9.723 8436	509	0.276 1564	9.946 3371	111	0	6
	10	9.670 2205	397	9.723 8945	509	0.276 1055	9.946 3260	112	50	
	20	9.670 2602	398	9.723 9454	509	0.276 0546	9.946 3148	111	40	
	30	9.670 3000	397	9.723 9963	509	0.276 0037	9.946 3037	112	30	
	40	9.670 3397	398	9.724 0472	509	0.275 9528	9.946 2925	111	20	
	50	9.670 3795	397	9.724 0981	509	0.275 9019	9.946 2814	112	10	
55	0	9.670 4192	398	9.724 1490	509	0.275 8510	9.946 2702	112	0	5
	10	9.670 4590	397	9.724 1999	509	0.275 8001	9.946 2590	111	50	
	20	9.670 4987	397	9.724 2508	509	0.275 7492	9.946 2479	112	40	
	30	9.670 5384	397	9.724 3017	509	0.275 6983	9.946 2367	111	30	
	40	9.670 5781	398	9.724 3526	509	0.275 6474	9.946 2256	112	20	
	50	9.670 6179	397	9.724 4035	508	0.275 5965	9.946 2144	112	10	
56	0	9.670 6576	397	9.724 4543	509	0.275 5457	9.946 2032	111	0	4
	10	9.670 6973	397	9.724 5052	509	0.275 4948	9.946 1921	112	50	
	20	9.670 7370	397	9.724 5561	508	0.275 4439	9.946 1809	112	40	
	30	9.670 7767	397	9.724 6069	509	0.275 3931	9.946 1697	111	30	
	40	9.670 8164	397	9.724 6578	509	0.275 3422	9.946 1586	112	20	
	50	9.670 8561	397	9.724 7087	508	0.275 2913	9.946 1474	112	10	
57	0	9.670 8958	396	9.724 7595	509	0.275 2405	9.946 1362	111	0	3
	10	9.670 9354	397	9.724 8104	508	0.275 1896	9.946 1251	112	50	
	20	9.670 9751	397	9.724 8612	509	0.275 1388	9.946 1139	112	40	
	30	9.671 0148	396	9.724 9121	508	0.275 0879	9.946 1027	112	30	
	40	9.671 0544	397	9.724 9629	509	0.275 0371	9.946 0915	111	20	
	50	9.671 0941	397	9.725 0138	508	0.274 9862	9.946 0804	112	10	
58	0	9.671 1338	396	9.725 0646	508	0.274 9354	9.946 0692	112	0	2
	10	9.671 1734	397	9.725 1154	509	0.274 8846	9.946 0580	112	50	
	20	9.671 2131	396	9.725 1663	508	0.274 8337	9.946 0468	112	40	
	30	9.671 2527	397	9.725 2171	508	0.274 7829	9.946 0356	112	30	
	40	9.671 2924	396	9.725 2679	508	0.274 7321	9.946 0244	111	20	
	50	9.671 3320	396	9.725 3187	508	0.274 6813	9.946 0133	112	10	
59	0	9.671 3716	396	9.725 3695	509	0.274 6305	9.946 0021	112	0	1
	10	9.671 4112	397	9.725 4204	508	0.274 5796	9.945 9909	112	50	
	20	9.671 4509	396	9.725 4712	508	0.274 5288	9.945 9797	112	40	
	30	9.671 4905	396	9.725 5220	508	0.274 4780	9.945 9685	112	30	
	40	9.671 5301	396	9.725 5728	508	0.274 4272	9.945 9573	112	20	
	50	9.671 5697	396	9.725 6236	508	0.274 3764	9.945 9461	112	10	
60	0	9.671 6093		9.725 6744		0.274 3256	9.945 9349		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

62°

509	
1	50.9
2	101.8
3	152.7
4	203.6
5	254.5
6	305.4
7	356.3
8	407.2
9	458.1

508	
1	50.8
2	101.6
3	152.4
4	203.2
5	254.0
6	304.8
7	355.6
8	406.4
9	457.2

398	
1	39.8
2	79.6
3	119.4
4	159.2
5	199.0
6	238.8
7	278.6
8	318.4
9	358.2

397	
1	39.7
2	79.4
3	119.1
4	158.8
5	198.5
6	238.2
7	277.9
8	317.6
9	357.3

396	
1	39.6
2	79.2
3	118.8
4	158.4
5	198.0
6	237.6
7	277.2
8	316.8
9	356.4

112	
1	11.2
2	22.4
3	33.6
4	44.8
5	56.0
6	67.2
7	78.4
8	89.6
9	100.8

28°

	508	507	506	395	394	112
1	50.8	50.7	50.6	39.5	39.4	11.2
2	101.6	101.4	101.2	79.0	78.8	22.4
3	152.4	152.1	151.8	118.5	118.2	33.6
4	203.2	202.8	202.4	158.0	157.6	44.8
5	254.0	253.5	253.0	197.5	197.0	56.0
6	304.8	304.2	303.6	237.0	236.4	67.2
7	355.6	354.9	354.2	276.5	275.8	78.4
8	406.4	405.6	404.8	316.0	315.2	89.6
9	457.2	456.3	455.4	355.5	354.6	100.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.671 6093	396	9.725 6744	508	0.274 3256	9.945 9349	112	0	60
	10	9.671 6489	396	9.725 7252	507	0.274 2748	9.945 9237	112	50	
	20	9.671 6885	396	9.725 7759	508	0.274 2241	9.945 9125	112	40	
	30	9.671 7281	396	9.725 8267	508	0.274 1733	9.945 9013	112	30	
	40	9.671 7677	395	9.725 8775	508	0.274 1225	9.945 8901	112	20	
	50	9.671 8072	396	9.725 9283	508	0.274 0717	9.945 8789	112	10	
1	0	9.671 8468	396	9.725 9791	507	0.274 0209	9.945 8677	112	0	59
	10	9.671 8864	395	9.726 0298	508	0.273 9702	9.945 8565	112	50	
	20	9.671 9259	396	9.726 0806	508	0.273 9194	9.945 8453	112	40	
	30	9.671 9655	396	9.726 1314	507	0.273 8686	9.945 8341	112	30	
	40	9.672 0051	395	9.726 1821	508	0.273 8179	9.945 8229	112	20	
	50	9.672 0446	395	9.726 2329	508	0.273 7671	9.945 8117	112	10	
2	0	9.672 0841	396	9.726 2837	507	0.273 7163	9.945 8005	112	0	58
	10	9.672 1237	395	9.726 3344	508	0.273 6656	9.945 7893	112	50	
	20	9.672 1632	396	9.726 3852	507	0.273 6148	9.945 7781	112	40	
	30	9.672 2028	395	9.726 4359	507	0.273 5641	9.945 7669	113	30	
	40	9.672 2423	395	9.726 4866	508	0.273 5134	9.945 7556	112	20	
	50	9.672 2818	395	9.726 5374	507	0.273 4626	9.945 7444	112	10	
3	0	9.672 3213	395	9.726 5881	508	0.273 4119	9.945 7332	112	0	57
	10	9.672 3608	395	9.726 6389	507	0.273 3611	9.945 7220	112	50	
	20	9.672 4003	396	9.726 6896	507	0.273 3104	9.945 7108	113	40	
	30	9.672 4399	395	9.726 7403	507	0.273 2597	9.945 6995	112	30	
	40	9.672 4794	394	9.726 7910	508	0.273 2090	9.945 6883	112	20	
	50	9.672 5188	395	9.726 8418	507	0.273 1582	9.945 6771	112	10	
4	0	9.672 5583	395	9.726 8925	507	0.273 1075	9.945 6659	113	0	56
	10	9.672 5978	395	9.726 9432	507	0.273 0568	9.945 6546	112	50	
	20	9.672 6373	395	9.726 9939	507	0.273 0061	9.945 6434	112	40	
	30	9.672 6768	395	9.727 0446	507	0.272 9554	9.945 6322	113	30	
	40	9.672 7163	394	9.727 0953	507	0.272 9047	9.945 6209	112	20	
	50	9.672 7557	395	9.727 1460	507	0.272 8540	9.945 6097	112	10	
5	0	9.672 7952	394	9.727 1967	507	0.272 8033	9.945 5985	113	0	55
	10	9.672 8346	395	9.727 2474	507	0.272 7526	9.945 5872	112	50	
	20	9.672 8741	394	9.727 2981	507	0.272 7019	9.945 5760	112	40	
	30	9.672 9135	395	9.727 3488	507	0.272 6512	9.945 5648	113	30	
	40	9.672 9530	394	9.727 3995	506	0.272 6005	9.945 5535	112	20	
	50	9.672 9924	395	9.727 4501	507	0.272 5499	9.945 5423	113	10	
6	0	9.673 0319	394	9.727 5008	507	0.272 4992	9.945 5310	112	0	54
	10	9.673 0713	394	9.727 5515	507	0.272 4485	9.945 5198	112	50	
	20	9.673 1107	394	9.727 6022	506	0.272 3978	9.945 5086	113	40	
	30	9.673 1501	395	9.727 6528	507	0.272 3472	9.945 4973	112	30	
	40	9.673 1896	394	9.727 7035	506	0.272 2965	9.945 4861	113	20	
	50	9.673 2290	394	9.727 7541	507	0.272 2459	9.945 4748	112	10	
7	0	9.673 2684	394	9.727 8048	507	0.272 1952	9.945 4636	113	0	53
	10	9.673 3078	394	9.727 8555	506	0.272 1445	9.945 4523	112	50	
	20	9.673 3472	394	9.727 9061	507	0.272 0939	9.945 4411	113	40	
	30	9.673 3866	394	9.727 9568	506	0.272 0432	9.945 4298	112	30	
	40	9.673 4260	393	9.728 0074	506	0.271 9926	9.945 4186	113	20	
	50	9.673 4653	394	9.728 0580	507	0.271 9420	9.945 4073	113	10	
8	0	9.673 5047	394	9.728 1087	506	0.271 8913	9.945 3960	112	0	52
	10	9.673 5441	394	9.728 1593	506	0.271 8407	9.945 3848	113	50	
	20	9.673 5835	393	9.728 2099	507	0.271 7901	9.945 3735	112	40	
	30	9.673 6228	394	9.728 2606	506	0.271 7394	9.945 3623	113	30	
	40	9.673 6622	394	9.728 3112	506	0.271 6888	9.945 3510	113	20	
	50	9.673 7016	393	9.728 3618	506	0.271 6382	9.945 3397	112	10	
9	0	9.673 7409	394	9.728 4124	507	0.271 5876	9.945 3285	113	0	51
	10	9.673 7803	393	9.728 4631	506	0.271 5369	9.945 3172	113	50	
	20	9.673 8196	393	9.728 5137	506	0.271 4863	9.945 3059	112	40	
	30	9.673 8589	394	9.728 5643	506	0.271 4357	9.945 2947	113	30	
	40	9.673 8983	393	9.728 6149	506	0.271 3851	9.945 2834	113	20	
	50	9.673 9376	393	9.728 6655	506	0.271 3345	9.945 2721	112	10	
10	0	9.673 9769		9.728 7161		0.271 2839	9.945 2609		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

61°

28°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.673 9769	393	9.728 7161	506	0.271 2839	9.945 2609	113	0	50
	10	9.674 0162	394	9.728 7667	506	0.271 2333	9.945 2496	113	50	
	20	9.674 0556	393	9.728 8173	506	0.271 1827	9.945 2383	113	40	
	30	9.674 0949	393	9.728 8679	505	0.271 1321	9.945 2270	113	30	
	40	9.674 1342	393	9.728 9184	506	0.271 0816	9.945 2157	112	20	
	50	9.674 1735	393	9.728 9690	506	0.271 0310	9.945 2045	113	10	
11	0	9.674 2128	393	9.729 0196	506	0.270 9804	9.945 1932	113	0	49
	10	9.674 2521	393	9.729 0702	505	0.270 9298	9.945 1819	113	50	
	20	9.674 2914	392	9.729 1207	506	0.270 8793	9.945 1706	113	40	
	30	9.674 3306	393	9.729 1713	506	0.270 8287	9.945 1593	113	30	
	40	9.674 3699	393	9.729 2219	505	0.270 7781	9.945 1480	112	20	
	50	9.674 4092	393	9.729 2724	506	0.270 7276	9.945 1368	113	10	
12	0	9.674 4485	392	9.729 3230	506	0.270 6770	9.945 1255	113	0	48
	10	9.674 4877	393	9.729 3736	505	0.270 6264	9.945 1142	113	50	
	20	9.674 5270	393	9.729 4241	506	0.270 5759	9.945 1029	113	40	
	30	9.674 5663	392	9.729 4747	505	0.270 5253	9.945 0916	113	30	
	40	9.674 6055	393	9.729 5252	505	0.270 4748	9.945 0803	113	20	
	50	9.674 6448	392	9.729 5757	506	0.270 4243	9.945 0690	113	10	
13	0	9.674 6840	392	9.729 6263	505	0.270 3737	9.945 0577	113	0	47
	10	9.674 7232	393	9.729 6768	506	0.270 3232	9.945 0464	113	50	
	20	9.674 7625	392	9.729 7274	505	0.270 2726	9.945 0351	113	40	
	30	9.674 8017	392	9.729 7779	505	0.270 2221	9.945 0238	113	30	
	40	9.674 8409	392	9.729 8284	505	0.270 1716	9.945 0125	113	20	
	50	9.674 8801	393	9.729 8789	506	0.270 1211	9.945 0012	113	10	
14	0	9.674 9194	392	9.729 9295	505	0.270 0705	9.944 9899	113	0	46
	10	9.674 9586	392	9.729 9800	505	0.270 0200	9.944 9786	113	50	
	20	9.674 9978	392	9.730 0305	505	0.269 9695	9.944 9673	113	40	
	30	9.675 0370	392	9.730 0810	505	0.269 9190	9.944 9560	113	30	
	40	9.675 0762	392	9.730 1315	505	0.269 8685	9.944 9447	113	20	
	50	9.675 1154	392	9.730 1820	505	0.269 8180	9.944 9334	114	10	
15	0	9.675 1546	391	9.730 2325	505	0.269 7675	9.944 9220	113	0	45
	10	9.675 1937	392	9.730 2830	505	0.269 7170	9.944 9107	113	50	
	20	9.675 2329	392	9.730 3335	505	0.269 6665	9.944 8994	113	40	
	30	9.675 2721	392	9.730 3840	505	0.269 6160	9.944 8881	113	30	
	40	9.675 3113	391	9.730 4345	505	0.269 5655	9.944 8768	113	20	
	50	9.675 3504	392	9.730 4850	504	0.269 5150	9.944 8655	114	10	
16	0	9.675 3896	391	9.730 5354	505	0.269 4646	9.944 8541	113	0	44
	10	9.675 4287	392	9.730 5859	505	0.269 4141	9.944 8428	113	50	
	20	9.675 4679	391	9.730 6364	505	0.269 3636	9.944 8315	113	40	
	30	9.675 5070	392	9.730 6869	504	0.269 3131	9.944 8202	114	30	
	40	9.675 5462	391	9.730 7373	505	0.269 2627	9.944 8088	113	20	
	50	9.675 5853	392	9.730 7878	505	0.269 2122	9.944 7975	113	10	
17	0	9.675 6245	391	9.730 8383	504	0.269 1617	9.944 7862	113	0	43
	10	9.675 6636	391	9.730 8887	505	0.269 1113	9.944 7749	114	50	
	20	9.675 7027	391	9.730 9392	504	0.269 0608	9.944 7635	113	40	
	30	9.675 7418	391	9.730 9896	505	0.269 0104	9.944 7522	113	30	
	40	9.675 7809	391	9.731 0401	504	0.268 9599	9.944 7409	114	20	
	50	9.675 8200	392	9.731 0905	505	0.268 9095	9.944 7295	113	10	
18	0	9.675 8592	391	9.731 1410	504	0.268 8590	9.944 7182	113	0	42
	10	9.675 8983	391	9.731 1914	504	0.268 8086	9.944 7069	114	50	
	20	9.675 9374	390	9.731 2418	505	0.268 7582	9.944 6955	113	40	
	30	9.675 9764	391	9.731 2923	504	0.268 7077	9.944 6842	114	30	
	40	9.676 0155	391	9.731 3427	504	0.268 6573	9.944 6728	113	20	
	50	9.676 0546	391	9.731 3931	505	0.268 6069	9.944 6615	114	10	
19	0	9.676 0937	391	9.731 4436	504	0.268 5564	9.944 6501	113	0	41
	10	9.676 1328	390	9.731 4940	504	0.268 5060	9.944 6388	113	50	
	20	9.676 1718	391	9.731 5444	504	0.268 4556	9.944 6275	114	40	
	30	9.676 2109	391	9.731 5948	504	0.268 4052	9.944 6161	113	30	
	40	9.676 2500	390	9.731 6452	504	0.268 3548	9.944 6048	114	20	
	50	9.676 2890	391	9.731 6956	504	0.268 3044	9.944 5934	113	10	
20	0	9.676 3281		9.731 7460		0.268 2540	9.944 5821		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

61°

	505
1	50.5
2	101.0
3	151.5
4	202.0
5	252.5
6	303.0
7	353.5
8	404.0
9	454.5

	504
1	50.4
2	100.8
3	151.2
4	201.6
5	252.0
6	302.4
7	352.8
8	403.2
9	453.6

	393
1	39.3
2	78.6
3	117.9
4	157.2
5	196.5
6	235.8
7	275.1
8	314.4
9	353.7

	392
1	39.2
2	78.4
3	117.6
4	156.8
5	196.0
6	235.2
7	274.4
8	313.6
9	352.8

	391
1	39.1
2	78.2
3	117.3
4	156.4
5	195.5
6	234.6
7	273.7
8	312.8
9	351.9

	113
1	11.3
2	22.6
3	33.9
4	45.2
5	56.5
6	67.8
7	79.1
8	90.4
9	101.7

28°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.676 3281	390	9.731 7460	504	0.268 2540	9.944 5821	114	0	40
	10	9.676 3671	391	9.731 7964	504	0.268 2036	9.944 5707	114	50	
	20	9.676 4062	390	9.731 8468	504	0.268 1532	9.944 5593	113	40	
	30	9.676 4452	390	9.731 8972	504	0.268 1028	9.944 5480	114	30	
	40	9.676 4842	391	9.731 9476	504	0.268 0524	9.944 5366	113	20	
	50	9.676 5233	390	9.731 9980	504	0.268 0020	9.944 5253	114	10	
21	0	9.676 5623	390	9.732 0484	504	0.267 9516	9.944 5139	114	0	39
	10	9.676 6013	390	9.732 0988	503	0.267 9012	9.944 5025	113	50	
	20	9.676 6403	390	9.732 1491	504	0.267 8509	9.944 4912	114	40	
	30	9.676 6793	390	9.732 1995	504	0.267 8005	9.944 4798	113	30	
	40	9.676 7183	390	9.732 2499	504	0.267 7501	9.944 4685	114	20	
	50	9.676 7573	390	9.732 3003	503	0.267 6997	9.944 4571	114	10	
22	0	9.676 7963	390	9.732 3506	504	0.267 6494	9.944 4457	113	0	38
	10	9.676 8353	390	9.732 4010	503	0.267 5990	9.944 4344	114	50	
	20	9.676 8743	390	9.732 4513	504	0.267 5487	9.944 4230	114	40	
	30	9.676 9133	390	9.732 5017	503	0.267 4983	9.944 4116	114	30	
	40	9.676 9523	390	9.732 5520	504	0.267 4480	9.944 4002	113	20	
	50	9.676 9913	389	9.732 6024	503	0.267 3976	9.944 3889	114	10	
23	0	9.677 0302	390	9.732 6527	504	0.267 3473	9.944 3775	114	0	37
	10	9.677 0692	390	9.732 7031	503	0.267 2969	9.944 3661	114	50	
	20	9.677 1082	389	9.732 7534	504	0.267 2466	9.944 3547	114	40	
	30	9.677 1471	390	9.732 8038	503	0.267 1962	9.944 3433	113	30	
	40	9.677 1861	389	9.732 8541	503	0.267 1459	9.944 3320	114	20	
	50	9.677 2250	390	9.732 9044	503	0.267 0956	9.944 3206	114	10	
24	0	9.677 2640	389	9.732 9547	504	0.267 0453	9.944 3092	114	0	36
	10	9.677 3029	389	9.733 0051	503	0.266 9949	9.944 2978	114	50	
	20	9.677 3418	390	9.733 0554	503	0.266 9446	9.944 2864	114	40	
	30	9.677 3808	389	9.733 1057	503	0.266 8943	9.944 2750	113	30	
	40	9.677 4197	389	9.733 1560	503	0.266 8440	9.944 2637	114	20	
	50	9.677 4586	389	9.733 2063	503	0.266 7937	9.944 2523	114	10	
25	0	9.677 4975	389	9.733 2566	503	0.266 7434	9.944 2409	114	0	35
	10	9.677 5364	389	9.733 3069	503	0.266 6931	9.944 2295	114	50	
	20	9.677 5753	389	9.733 3572	503	0.266 6428	9.944 2181	114	40	
	30	9.677 6142	389	9.733 4075	503	0.266 5925	9.944 2067	114	30	
	40	9.677 6531	389	9.733 4578	503	0.266 5422	9.944 1953	114	20	
	50	9.677 6920	389	9.733 5081	503	0.266 4919	9.944 1839	114	10	
26	0	9.677 7309	389	9.733 5584	503	0.266 4416	9.944 1725	114	0	34
	10	9.677 7698	389	9.733 6087	503	0.266 3913	9.944 1611	114	50	
	20	9.677 8087	389	9.733 6590	503	0.266 3410	9.944 1497	114	40	
	30	9.677 8476	388	9.733 7093	502	0.266 2907	9.944 1383	114	30	
	40	9.677 8864	389	9.733 7595	503	0.266 2405	9.944 1269	114	20	
	50	9.677 9253	389	9.733 8098	503	0.266 1902	9.944 1155	114	10	
27	0	9.677 9642	388	9.733 8601	503	0.266 1399	9.944 1041	114	0	33
	10	9.678 0030	389	9.733 9104	502	0.266 0896	9.944 0927	115	50	
	20	9.678 0419	388	9.733 9606	503	0.266 0394	9.944 0812	114	40	
	30	9.678 0807	389	9.734 0109	502	0.265 9891	9.944 0698	114	30	
	40	9.678 1196	388	9.734 0611	503	0.265 9389	9.944 0584	114	20	
	50	9.678 1584	388	9.734 1114	502	0.265 8886	9.944 0470	114	10	
28	0	9.678 1972	389	9.734 1616	503	0.265 8384	9.944 0356	114	0	32
	10	9.678 2361	388	9.734 2119	502	0.265 7881	9.944 0242	114	50	
	20	9.678 2749	388	9.734 2621	503	0.265 7379	9.944 0128	115	40	
	30	9.678 3137	388	9.734 3124	502	0.265 6876	9.944 0013	114	30	
	40	9.678 3525	388	9.734 3626	502	0.265 6374	9.943 9899	114	20	
	50	9.678 3913	388	9.734 4128	503	0.265 5872	9.943 9785	114	10	
29	0	9.678 4301	389	9.734 4631	502	0.265 5369	9.943 9671	115	0	31
	10	9.678 4690	388	9.734 5133	502	0.265 4867	9.943 9556	114	50	
	20	9.678 5078	387	9.734 5635	502	0.265 4365	9.943 9442	114	40	
	30	9.678 5465	388	9.734 6137	503	0.265 3863	9.943 9328	114	30	
	40	9.678 5853	388	9.734 6640	502	0.265 3360	9.943 9214	115	20	
	50	9.678 6241	388	9.734 7142	502	0.265 2858	9.943 9099	114	10	
30	0	9.678 6629		9.734 7644		0.265 2356	9.943 8985		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

61°

	504
1	50.4
2	100.8
3	151.2
4	201.6
5	252.0
6	302.4
7	352.8
8	403.2
9	453.6

	503
1	50.3
2	100.6
3	150.9
4	201.2
5	251.5
6	301.8
7	352.1
8	402.4
9	452.7

	502
1	50.2
2	100.4
3	150.6
4	200.8
5	251.0
6	301.2
7	351.4
8	401.6
9	451.8

	390
1	39.0
2	78.0
3	117.0
4	156.0
5	195.0
6	234.0
7	273.0
8	312.0
9	351.0

	389
1	38.9
2	77.8
3	116.7
4	155.6
5	194.5
6	233.4
7	272.3
8	311.2
9	350.1

	114
1	11.4
2	22.8
3	34.2
4	45.6
5	57.0
6	68.4
7	79.8
8	91.2
9	102.6

28°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.678 6629	388	9.734 7644	502	0.265 2356	9.943 8985	114	0	30
	10	9.678 7017	388	9.734 8146	502	0.265 1854	9.943 8871	115	50	
	20	9.678 7405	387	9.734 8648	502	0.265 1352	9.943 8756	114	40	
	30	9.678 7792	388	9.734 9150	502	0.265 0850	9.943 8642	114	30	
	40	9.678 8180	387	9.734 9652	502	0.265 0348	9.943 8528	115	20	
	50	9.678 8567	388	9.735 0154	502	0.264 9846	9.943 8413	114	10	
31	0	9.678 8955	387	9.735 0656	502	0.264 9344	9.943 8299	115	0	29
	10	9.678 9342	388	9.735 1158	502	0.264 8842	9.943 8184	114	50	
	20	9.678 9730	387	9.735 1660	502	0.264 8340	9.943 8070	114	40	
	30	9.679 0117	388	9.735 2162	501	0.264 7838	9.943 7956	115	30	
	40	9.679 0505	387	9.735 2663	502	0.264 7337	9.943 7841	114	20	
	50	9.679 0892	387	9.735 3165	502	0.264 6835	9.943 7727	115	10	
32	0	9.679 1279	387	9.735 3667	502	0.264 6333	9.943 7612	114	0	28
	10	9.679 1666	388	9.735 4169	501	0.264 5831	9.943 7498	115	50	
	20	9.679 2054	387	9.735 4670	502	0.264 5330	9.943 7383	114	40	
	30	9.679 2441	387	9.735 5172	502	0.264 4828	9.943 7269	115	30	
	40	9.679 2828	387	9.735 5674	501	0.264 4326	9.943 7154	114	20	
	50	9.679 3215	387	9.735 6175	502	0.264 3825	9.943 7040	115	10	
33	0	9.679 3602	387	9.735 6677	501	0.264 3323	9.943 6925	114	0	27
	10	9.679 3989	387	9.735 7178	502	0.264 2822	9.943 6811	115	50	
	20	9.679 4376	387	9.735 7680	501	0.264 2320	9.943 6696	115	40	
	30	9.679 4763	387	9.735 8181	502	0.264 1819	9.943 6581	114	30	
	40	9.679 5150	386	9.735 8683	501	0.264 1317	9.943 6467	115	20	
	50	9.679 5536	387	9.735 9184	501	0.264 0816	9.943 6352	114	10	
34	0	9.679 5923	387	9.735 9685	502	0.264 0315	9.943 6238	115	0	26
	10	9.679 6310	386	9.736 0187	501	0.263 9813	9.943 6123	115	50	
	20	9.679 6696	387	9.736 0688	501	0.263 9312	9.943 6008	114	40	
	30	9.679 7083	387	9.736 1189	502	0.263 8811	9.943 5894	115	30	
	40	9.679 7470	386	9.736 1691	501	0.263 8309	9.943 5779	115	20	
	50	9.679 7856	387	9.736 2192	501	0.263 7808	9.943 5664	115	10	
35	0	9.679 8243	386	9.736 2693	501	0.263 7307	9.943 5549	114	0	25
	10	9.679 8629	386	9.736 3194	501	0.263 6806	9.943 5435	115	50	
	20	9.679 9015	387	9.736 3695	501	0.263 6305	9.943 5320	115	40	
	30	9.679 9402	386	9.736 4196	501	0.263 5804	9.943 5205	114	30	
	40	9.679 9788	386	9.736 4697	501	0.263 5303	9.943 5091	115	20	
	50	9.680 0174	386	9.736 5198	501	0.263 4802	9.943 4976	115	10	
36	0	9.680 0560	387	9.736 5699	501	0.263 4301	9.943 4861	115	0	24
	10	9.680 0947	386	9.736 6200	501	0.263 3800	9.943 4746	115	50	
	20	9.680 1333	386	9.736 6701	501	0.263 3299	9.943 4631	115	40	
	30	9.680 1719	386	9.736 7202	501	0.263 2798	9.943 4516	114	30	
	40	9.680 2105	386	9.736 7703	501	0.263 2297	9.943 4402	115	20	
	50	9.680 2491	386	9.736 8204	501	0.263 1796	9.943 4287	115	10	
37	0	9.680 2877	386	9.736 8705	501	0.263 1295	9.943 4172	115	0	23
	10	9.680 3263	385	9.736 9206	500	0.263 0794	9.943 4057	115	50	
	20	9.680 3648	386	9.736 9706	501	0.263 0294	9.943 3942	115	40	
	30	9.680 4034	386	9.737 0207	501	0.262 9793	9.943 3827	115	30	
	40	9.680 4420	386	9.737 0708	500	0.262 9292	9.943 3712	115	20	
	50	9.680 4806	385	9.737 1208	501	0.262 8792	9.943 3597	115	10	
38	0	9.680 5191	386	9.737 1709	501	0.262 8291	9.943 3482	115	0	22
	10	9.680 5577	386	9.737 2210	500	0.262 7790	9.943 3367	115	50	
	20	9.680 5963	385	9.737 2710	501	0.262 7290	9.943 3252	114	40	
	30	9.680 6348	386	9.737 3211	500	0.262 6789	9.943 3138	115	30	
	40	9.680 6734	385	9.737 3711	501	0.262 6289	9.943 3023	116	20	
	50	9.680 7119	385	9.737 4212	500	0.262 5788	9.943 2907	115	10	
39	0	9.680 7504	386	9.737 4712	500	0.262 5288	9.943 2792	115	0	21
	10	9.680 7890	385	9.737 5212	501	0.262 4788	9.943 2677	115	50	
	20	9.680 8275	385	9.737 5713	500	0.262 4287	9.943 2562	115	40	
	30	9.680 8660	386	9.737 6213	500	0.262 3787	9.943 2447	115	30	
	40	9.680 9046	385	9.737 6713	501	0.262 3287	9.943 2332	115	20	
	50	9.680 9431	385	9.737 7214	500	0.262 2786	9.943 2217	115	10	
40	0	9.680 9816		9.737 7714		0.262 2286	9.943 2102		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

61°

501	
1	50.1
2	100.2
3	150.3
4	200.4
5	250.5
6	300.6
7	350.7
8	400.8
9	450.9

500	
1	50.0
2	100.0
3	150.0
4	200.0
5	250.0
6	300.0
7	350.0
8	400.0
9	450.0

388	
1	38.8
2	77.6
3	116.4
4	155.2
5	194.0
6	232.8
7	271.6
8	310.4
9	349.2

387	
1	38.7
2	77.4
3	116.1
4	154.8
5	193.5
6	232.2
7	270.9
8	309.6
9	348.3

386	
1	38.6
2	77.2
3	115.8
4	154.4
5	193.0
6	231.6
7	270.2
8	308.8
9	347.4

115	
1	11.5
2	23.0
3	34.5
4	46.0
5	57.5
6	69.0
7	80.5
8	92.0
9	103.5

28°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.680 9816	385	9.737 7714	500	0.262 2286	9.943 2102	115	0	20
	10	9.681 0201	385	9.737 8214	500	0.262 1786	9.943 1987	115	50	
	20	9.681 0586	385	9.737 8714	500	0.262 1286	9.943 1872	115	40	
	30	9.681 0971	385	9.737 9214	501	0.262 0786	9.943 1757	116	30	
	40	9.681 1356	385	9.737 9715	500	0.262 0285	9.943 1641	115	20	
	50	9.681 1741	385	9.738 0215	500	0.261 9785	9.943 1526	115	10	
41	0	9.681 2126	385	9.738 0715	500	0.261 9285	9.943 1411	115	0	19
	10	9.681 2511	384	9.738 1215	500	0.261 8785	9.943 1296	115	50	
	20	9.681 2895	385	9.738 1715	500	0.261 8285	9.943 1181	116	40	
	30	9.681 3280	385	9.738 2215	500	0.261 7785	9.943 1065	115	30	
	40	9.681 3665	384	9.738 2715	500	0.261 7285	9.943 0950	115	20	
	50	9.681 4049	385	9.738 3215	499	0.261 6785	9.943 0835	115	10	
42	0	9.681 4434	385	9.738 3714	500	0.261 6286	9.943 0720	116	0	18
	10	9.681 4819	384	9.738 4214	500	0.261 5786	9.943 0604	115	50	
	20	9.681 5203	385	9.738 4714	500	0.261 5286	9.943 0489	115	40	
	30	9.681 5588	384	9.738 5214	500	0.261 4786	9.943 0374	116	30	
	40	9.681 5972	384	9.738 5714	499	0.261 4286	9.943 0258	115	20	
	50	9.681 6356	385	9.738 6213	500	0.261 3787	9.943 0143	115	10	
43	0	9.681 6741	384	9.738 6713	500	0.261 3287	9.943 0028	116	0	17
	10	9.681 7125	384	9.738 7213	499	0.261 2787	9.942 9912	115	50	
	20	9.681 7509	385	9.738 7712	500	0.261 2288	9.942 9797	115	40	
	30	9.681 7894	384	9.738 8212	499	0.261 1788	9.942 9682	116	30	
	40	9.681 8278	384	9.738 8711	500	0.261 1289	9.942 9566	115	20	
	50	9.681 8662	384	9.738 9211	499	0.261 0789	9.942 9451	116	10	
44	0	9.681 9046	384	9.738 9710	500	0.261 0290	9.942 9335	115	0	16
	10	9.681 9430	384	9.739 0210	499	0.260 9790	9.942 9220	115	50	
	20	9.681 9814	384	9.739 0709	500	0.260 9291	9.942 9105	116	40	
	30	9.682 0198	384	9.739 1209	499	0.260 8791	9.942 8989	115	30	
	40	9.682 0582	384	9.739 1708	499	0.260 8292	9.942 8874	116	20	
	50	9.682 0966	383	9.739 2207	500	0.260 7793	9.942 8758	115	10	
45	0	9.682 1349	384	9.739 2707	499	0.260 7293	9.942 8643	116	0	15
	10	9.682 1733	384	9.739 3206	499	0.260 6794	9.942 8527	115	50	
	20	9.682 2117	384	9.739 3705	500	0.260 6295	9.942 8412	116	40	
	30	9.682 2501	383	9.739 4205	499	0.260 5795	9.942 8296	116	30	
	40	9.682 2884	384	9.739 4704	499	0.260 5296	9.942 8180	115	20	
	50	9.682 3268	383	9.739 5203	499	0.260 4797	9.942 8065	116	10	
46	0	9.682 3651	384	9.739 5702	499	0.260 4298	9.942 7949	115	0	14
	10	9.682 4035	383	9.739 6201	499	0.260 3799	9.942 7834	116	50	
	20	9.682 4418	384	9.739 6700	499	0.260 3300	9.942 7718	116	40	
	30	9.682 4802	383	9.739 7199	499	0.260 2801	9.942 7602	115	30	
	40	9.682 5185	383	9.739 7698	499	0.260 2302	9.942 7487	116	20	
	50	9.682 5568	384	9.739 8197	499	0.260 1803	9.942 7371	116	10	
47	0	9.682 5952	383	9.739 8696	499	0.260 1304	9.942 7255	115	0	13
	10	9.682 6335	383	9.739 9195	499	0.260 0805	9.942 7140	116	50	
	20	9.682 6718	383	9.739 9694	499	0.260 0306	9.942 7024	116	40	
	30	9.682 7101	383	9.740 0193	499	0.259 9807	9.942 6908	115	30	
	40	9.682 7484	383	9.740 0692	498	0.259 9308	9.942 6793	116	20	
	50	9.682 7867	383	9.740 1190	499	0.259 8810	9.942 6677	116	10	
48	0	9.682 8250	383	9.740 1689	499	0.259 8311	9.942 6561	116	0	12
	10	9.682 8633	383	9.740 2188	499	0.259 7812	9.942 6445	115	50	
	20	9.682 9016	383	9.740 2687	498	0.259 7313	9.942 6330	116	40	
	30	9.682 9399	383	9.740 3185	499	0.259 6815	9.942 6214	116	30	
	40	9.682 9782	383	9.740 3684	498	0.259 6316	9.942 6098	116	20	
	50	9.683 0165	383	9.740 4182	499	0.259 5818	9.942 5982	116	10	
49	0	9.683 0548	382	9.740 4681	499	0.259 5319	9.942 5866	115	0	11
	10	9.683 0930	383	9.740 5180	498	0.259 4820	9.942 5751	116	50	
	20	9.683 1313	383	9.740 5678	499	0.259 4322	9.942 5635	116	40	
	30	9.683 1696	382	9.740 6177	498	0.259 3823	9.942 5519	116	30	
	40	9.683 2078	383	9.740 6675	498	0.259 3325	9.942 5403	116	20	
	50	9.683 2461	382	9.740 7173	499	0.259 2827	9.942 5287	116	10	
50	0	9.683 2843		9.740 7672		0.259 2328	9.942 5171		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

61°

	500
1	50.0
2	100.0
3	150.0
4	200.0
5	250.0
6	300.0
7	350.0
8	400.0
9	450.0

	499
1	49.9
2	99.8
3	149.7
4	199.6
5	249.5
6	299.4
7	349.3
8	399.2
9	449.1

	498
1	49.8
2	99.6
3	149.4
4	199.2
5	249.0
6	298.8
7	348.6
8	398.4
9	448.2

	385
1	38.5
2	77.0
3	115.5
4	154.0
5	192.5
6	231.0
7	269.5
8	308.0
9	346.5

	384
1	38.4
2	76.8
3	115.2
4	153.6
5	192.0
6	230.4
7	268.8
8	307.2
9	345.6

	115
1	11.5
2	23.0
3	34.5
4	46.0
5	57.5
6	69.0
7	80.5
8	92.0
9	103.5

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.683 2843	383	9.740 7672	498	0.259 2328	9.942 5171	116	0	10
	10	9.683 3226	382	9.740 8170	499	0.259 1830	9.942 5055	116	50	
	20	9.683 3608	382	9.740 8669	498	0.259 1331	9.942 4939	116	40	
	30	9.683 3990	383	9.740 9167	498	0.259 0833	9.942 4823	116	30	
	40	9.683 4373	382	9.740 9665	498	0.259 0335	9.942 4707	115	20	
	50	9.683 4755	382	9.741 0163	499	0.258 9837	9.942 4592	116	10	
51	0	9.683 5137	382	9.741 0662	498	0.258 9338	9.942 4476	116	0	9
	10	9.683 5519	382	9.741 1160	498	0.258 8840	9.942 4360	116	50	
	20	9.683 5901	383	9.741 1658	498	0.258 8342	9.942 4244	116	40	
	30	9.683 6284	382	9.741 2156	498	0.258 7844	9.942 4128	117	30	
	40	9.683 6666	382	9.741 2654	498	0.258 7346	9.942 4011	116	20	
	50	9.683 7048	382	9.741 3152	498	0.258 6848	9.942 3895	116	10	
52	0	9.683 7430	381	9.741 3650	498	0.258 6350	9.942 3779	116	0	8
	10	9.683 7811	382	9.741 4148	498	0.258 5852	9.942 3663	116	50	
	20	9.683 8193	382	9.741 4646	498	0.258 5354	9.942 3547	116	40	
	30	9.683 8575	382	9.741 5144	498	0.258 4856	9.942 3431	116	30	
	40	9.683 8957	382	9.741 5642	498	0.258 4358	9.942 3315	116	20	
	50	9.683 9339	381	9.741 6140	498	0.258 3860	9.942 3199	116	10	
53	0	9.683 9720	382	9.741 6638	498	0.258 3362	9.942 3083	116	0	7
	10	9.684 0102	382	9.741 7136	497	0.258 2864	9.942 2967	117	50	
	20	9.684 0484	381	9.741 7633	498	0.258 2367	9.942 2850	116	40	
	30	9.684 0865	382	9.741 8131	498	0.258 1869	9.942 2734	116	30	
	40	9.684 1247	381	9.741 8629	497	0.258 1371	9.942 2618	116	20	
	50	9.684 1628	382	9.741 9126	498	0.258 0874	9.942 2502	116	10	
54	0	9.684 2010	381	9.741 9624	498	0.258 0376	9.942 2386	117	0	6
	10	9.684 2391	381	9.742 0122	497	0.257 9878	9.942 2269	116	50	
	20	9.684 2772	382	9.742 0619	498	0.257 9381	9.942 2153	116	40	
	30	9.684 3154	381	9.742 1117	497	0.257 8883	9.942 2037	116	30	
	40	9.684 3535	381	9.742 1614	498	0.257 8386	9.942 1921	117	20	
	50	9.684 3916	381	9.742 2112	497	0.257 7888	9.942 1804	116	10	
55	0	9.684 4297	381	9.742 2609	498	0.257 7391	9.942 1688	116	0	5
	10	9.684 4678	382	9.742 3107	497	0.257 6893	9.942 1572	117	50	
	20	9.684 5060	381	9.742 3604	498	0.257 6396	9.942 1455	116	40	
	30	9.684 5441	381	9.742 4102	497	0.257 5898	9.942 1339	116	30	
	40	9.684 5822	381	9.742 4599	497	0.257 5401	9.942 1223	117	20	
	50	9.684 6203	380	9.742 5096	498	0.257 4904	9.942 1106	116	10	
56	0	9.684 6583	381	9.742 5594	497	0.257 4406	9.942 0990	117	0	4
	10	9.684 6964	381	9.742 6091	497	0.257 3909	9.942 0873	116	50	
	20	9.684 7345	381	9.742 6588	497	0.257 3412	9.942 0757	116	40	
	30	9.684 7726	381	9.742 7085	498	0.257 2915	9.942 0641	117	30	
	40	9.684 8107	380	9.742 7583	497	0.257 2417	9.942 0524	116	20	
	50	9.684 8487	381	9.742 8080	497	0.257 1920	9.942 0408	117	10	
57	0	9.684 8868	381	9.742 8577	497	0.257 1423	9.942 0291	116	0	3
	10	9.684 9249	380	9.742 9074	497	0.257 0926	9.942 0175	117	50	
	20	9.684 9629	381	9.742 9571	497	0.257 0429	9.942 0058	116	40	
	30	9.685 0010	380	9.743 0068	497	0.256 9932	9.941 9942	117	30	
	40	9.685 0390	381	9.743 0565	497	0.256 9435	9.941 9825	116	20	
	50	9.685 0771	380	9.743 1062	497	0.256 8938	9.941 9709	117	10	
58	0	9.685 1151	380	9.743 1559	497	0.256 8441	9.941 9592	116	0	2
	10	9.685 1531	381	9.743 2056	497	0.256 7944	9.941 9476	117	50	
	20	9.685 1912	380	9.743 2553	496	0.256 7447	9.941 9359	117	40	
	30	9.685 2292	380	9.743 3049	497	0.256 6951	9.941 9242	116	30	
	40	9.685 2672	380	9.743 3546	497	0.256 6454	9.941 9126	117	20	
	50	9.685 3052	380	9.743 4043	497	0.256 5957	9.941 9009	116	10	
59	0	9.685 3432	381	9.743 4540	497	0.256 5460	9.941 8893	117	0	1
	10	9.685 3813	380	9.743 5037	496	0.256 4963	9.941 8776	117	50	
	20	9.685 4193	380	9.743 5533	497	0.256 4467	9.941 8659	116	40	
	30	9.685 4573	380	9.743 6030	497	0.256 3970	9.941 8543	117	30	
	40	9.685 4953	379	9.743 6527	496	0.256 3473	9.941 8426	117	20	
	50	9.685 5332	380	9.743 7023	497	0.256 2977	9.941 8309	116	10	
60	0	9.685 5712		9.743 7520		0.256 2480	9.941 8193		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

61°

	497
1	49.7
2	99.4
3	149.1
4	198.8
5	248.5
6	298.2
7	347.9
8	397.6
9	447.3

	496
1	49.6
2	99.2
3	148.8
4	198.4
5	248.0
6	297.6
7	347.2
8	396.8
9	446.4

	383
1	38.3
2	76.6
3	114.9
4	153.2
5	191.5
6	229.8
7	268.1
8	306.4
9	344.7

	382
1	38.2
2	76.4
3	114.6
4	152.8
5	191.0
6	229.2
7	267.4
8	305.6
9	343.8

	381
1	38.1
2	76.2
3	114.3
4	152.4
5	190.5
6	228.6
7	266.7
8	304.8
9	342.9

	116
1	11.6
2	23.2
3	34.8
4	46.4
5	58.0
6	69.6
7	81.2
8	92.8
9	104.4

29°

496	
1	49.6
2	99.2
3	148.8
4	198.4
5	248.0
6	297.6
7	347.2
8	396.8
9	446.4

495	
1	49.5
2	99.0
3	148.5
4	198.0
5	247.5
6	297.0
7	346.5
8	396.0
9	445.5

380	
1	38.0
2	76.0
3	114.0
4	152.0
5	190.0
6	228.0
7	266.0
8	304.0
9	342.0

379	
1	37.9
2	75.8
3	113.7
4	151.6
5	189.5
6	227.4
7	265.3
8	303.2
9	341.1

378	
1	37.8
2	75.6
3	113.4
4	151.2
5	189.0
6	226.8
7	264.6
8	302.4
9	340.2

117	
1	11.7
2	23.4
3	35.1
4	46.8
5	58.5
6	70.2
7	81.9
8	93.6
9	105.3

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.685 5712	380	9.743 7520	496	0.256 2480	9.941 8293	117	0	6
	10	9.685 6092	380	9.743 8016	497	0.256 1984	9.941 8176	117	50	
	20	9.685 6472	380	9.743 8513	496	0.256 1487	9.941 8059	117	40	
	30	9.685 6852	379	9.743 9009	497	0.256 0991	9.941 7942	116	30	
	40	9.685 7231	380	9.743 9506	496	0.256 0494	9.941 7826	117	20	
	50	9.685 7611	380	9.744 0002	497	0.255 9998	9.941 7709	117	10	
1	0	9.685 7991	379	9.744 0499	496	0.255 9501	9.941 7492	117	0	5
	10	9.685 8370	380	9.744 0995	496	0.255 9005	9.941 7375	117	50	
	20	9.685 8750	379	9.744 1491	496	0.255 8509	9.941 7258	116	40	
	30	9.685 9129	380	9.744 1987	497	0.255 8013	9.941 7142	117	30	
	40	9.685 9509	379	9.744 2484	496	0.255 7516	9.941 7025	117	20	
	50	9.685 9888	379	9.744 2980	496	0.255 7020	9.941 6908	117	10	
2	0	9.686 0267	380	9.744 3476	496	0.255 6524	9.941 6791	117	0	58
	10	9.686 0647	379	9.744 3972	497	0.255 6028	9.941 6674	117	50	
	20	9.686 1026	379	9.744 4469	496	0.255 5531	9.941 6557	117	40	
	30	9.686 1405	379	9.744 4965	496	0.255 5035	9.941 6440	116	30	
	40	9.686 1784	379	9.744 5461	496	0.255 4539	9.941 6324	117	20	
	50	9.686 2163	379	9.744 5957	496	0.255 4043	9.941 6207	117	10	
3	0	9.686 2542	380	9.744 6453	496	0.255 3547	9.941 6090	117	0	57
	10	9.686 2922	379	9.744 6949	496	0.255 3051	9.941 5973	117	50	
	20	9.686 3301	378	9.744 7445	496	0.255 2555	9.941 5856	117	40	
	30	9.686 3679	379	9.744 7941	496	0.255 2059	9.941 5739	117	30	
	40	9.686 4058	379	9.744 8437	496	0.255 1563	9.941 5622	117	20	
	50	9.686 4437	379	9.744 8933	495	0.255 1067	9.941 5505	117	10	
4	0	9.686 4816	379	9.744 9428	496	0.255 0572	9.941 5388	117	0	56
	10	9.686 5195	379	9.744 9924	496	0.255 0076	9.941 5271	117	50	
	20	9.686 5574	378	9.745 0420	496	0.254 9580	9.941 5154	117	40	
	30	9.686 5952	379	9.745 0916	496	0.254 9084	9.941 5037	118	30	
	40	9.686 6331	379	9.745 1412	495	0.254 8588	9.941 4919	117	20	
	50	9.686 6710	378	9.745 1907	496	0.254 8093	9.941 4802	117	10	
5	0	9.686 7088	379	9.745 2403	496	0.254 7597	9.941 4685	117	0	55
	10	9.686 7467	378	9.745 2899	495	0.254 7101	9.941 4568	117	50	
	20	9.686 7845	379	9.745 3394	496	0.254 6606	9.941 4451	117	40	
	30	9.686 8224	378	9.745 3890	495	0.254 6110	9.941 4334	117	30	
	40	9.686 8602	378	9.745 4385	496	0.254 5615	9.941 4217	117	20	
	50	9.686 8980	379	9.745 4881	495	0.254 5119	9.941 4100	118	10	
6	0	9.686 9359	378	9.745 5376	496	0.254 4624	9.941 3982	117	0	54
	10	9.686 9737	378	9.745 5872	495	0.254 4128	9.941 3865	117	50	
	20	9.687 0115	378	9.745 6367	496	0.254 3633	9.941 3748	117	40	
	30	9.687 0493	378	9.745 6863	495	0.254 3137	9.941 3631	118	30	
	40	9.687 0871	379	9.745 7358	495	0.254 2642	9.941 3513	117	20	
	50	9.687 1250	378	9.745 7853	496	0.254 2147	9.941 3396	117	10	
7	0	9.687 1628	378	9.745 8349	495	0.254 1651	9.941 3279	117	0	53
	10	9.687 2006	378	9.745 8844	495	0.254 1156	9.941 3162	118	50	
	20	9.687 2384	377	9.745 9339	495	0.254 0661	9.941 3044	117	40	
	30	9.687 2761	378	9.745 9834	496	0.254 0166	9.941 2927	117	30	
	40	9.687 3139	378	9.746 0330	495	0.253 9670	9.941 2810	118	20	
	50	9.687 3517	378	9.746 0825	495	0.253 9175	9.941 2692	117	10	
8	0	9.687 3895	378	9.746 1320	495	0.253 8680	9.941 2575	117	0	52
	10	9.687 4273	377	9.746 1815	495	0.253 8185	9.941 2458	118	50	
	20	9.687 4650	378	9.746 2310	495	0.253 7690	9.941 2340	117	40	
	30	9.687 5028	378	9.746 2805	495	0.253 7195	9.941 2223	117	30	
	40	9.687 5406	377	9.746 3300	495	0.253 6700	9.941 2106	118	20	
	50	9.687 5783	378	9.746 3795	495	0.253 6205	9.941 1988	117	10	
9	0	9.687 6161	377	9.746 4290	495	0.253 5710	9.941 1871	118	0	51
	10	9.687 6538	378	9.746 4785	495	0.253 5215	9.941 1753	117	50	
	20	9.687 6916	377	9.746 5280	495	0.253 4720	9.941 1636	118	40	
	30	9.687 7293	378	9.746 5775	495	0.253 4225	9.941 1518	117	30	
	40	9.687 7671	377	9.746 6270	494	0.253 3730	9.941 1401	118	20	
	50	9.687 8048	377	9.746 6764	495	0.253 3236	9.941 1283	117	10	
10	0	9.687 8425		9.746 7259		0.253 2741	9.941 1166		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

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29°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.687 8425	377	9.746 7259	495	0.253 2741	9.941 1166	118	0	50
	10	9.687 8802	378	9.746 7754	495	0.253 2246	9.941 1048	117	50	
	20	9.687 9180	377	9.746 8249	494	0.253 1751	9.941 0931	118	40	
	30	9.687 9557	377	9.746 8743	495	0.253 1257	9.941 0813	117	30	
	40	9.687 9934	377	9.746 9238	495	0.253 0762	9.941 0696	118	20	
	50	9.688 0311	377	9.746 9733	494	0.253 0267	9.941 0578	117	10	
11	0	9.688 0688	377	9.747 0227	495	0.252 9773	9.941 0461	118	0	49
	10	9.688 1065	377	9.747 0722	494	0.252 9278	9.941 0343	118	50	
	20	9.688 1442	377	9.747 1216	495	0.252 8784	9.941 0225	117	40	
	30	9.688 1819	377	9.747 1711	494	0.252 8289	9.941 0108	118	30	
	40	9.688 2196	376	9.747 2205	495	0.252 7795	9.940 9990	118	20	
	50	9.688 2572	377	9.747 2700	494	0.252 7300	9.940 9872	117	10	
12	0	9.688 2949	377	9.747 3194	495	0.252 6806	9.940 9755	118	0	48
	10	9.688 3326	376	9.747 3689	494	0.252 6311	9.940 9637	118	50	
	20	9.688 3702	377	9.747 4183	494	0.252 5817	9.940 9519	117	40	
	30	9.688 4079	377	9.747 4677	495	0.252 5323	9.940 9402	118	30	
	40	9.688 4456	376	9.747 5172	494	0.252 4828	9.940 9284	118	20	
	50	9.688 4832	377	9.747 5666	494	0.252 4334	9.940 9166	118	10	
13	0	9.688 5209	376	9.747 6160	494	0.252 3840	9.940 9048	117	0	47
	10	9.688 5585	377	9.747 6654	495	0.252 3346	9.940 8931	118	50	
	20	9.688 5962	376	9.747 7149	494	0.252 2851	9.940 8813	118	40	
	30	9.688 6338	376	9.747 7643	494	0.252 2357	9.940 8695	118	30	
	40	9.688 6714	377	9.747 8137	494	0.252 1863	9.940 8577	117	20	
	50	9.688 7091	376	9.747 8631	494	0.252 1369	9.940 8460	118	10	
14	0	9.688 7467	376	9.747 9125	494	0.252 0875	9.940 8342	118	0	46
	10	9.688 7843	376	9.747 9619	494	0.252 0381	9.940 8224	118	50	
	20	9.688 8219	376	9.748 0113	494	0.251 9887	9.940 8106	118	40	
	30	9.688 8595	376	9.748 0607	494	0.251 9393	9.940 7988	118	30	
	40	9.688 8971	376	9.748 1101	494	0.251 8899	9.940 7870	118	20	
	50	9.688 9347	376	9.748 1595	494	0.251 8405	9.940 7752	118	10	
15	0	9.688 9723	376	9.748 2089	494	0.251 7911	9.940 7634	117	0	45
	10	9.689 0099	376	9.748 2583	494	0.251 7417	9.940 7517	118	50	
	20	9.689 0475	376	9.748 3077	493	0.251 6923	9.940 7399	118	40	
	30	9.689 0851	376	9.748 3570	494	0.251 6430	9.940 7281	118	30	
	40	9.689 1227	376	9.748 4064	494	0.251 5936	9.940 7163	118	20	
	50	9.689 1603	375	9.748 4558	494	0.251 5442	9.940 7045	118	10	
16	0	9.689 1978	376	9.748 5052	493	0.251 4948	9.940 6927	118	0	44
	10	9.689 2354	376	9.748 5545	494	0.251 4455	9.940 6809	118	50	
	20	9.689 2730	375	9.748 6039	494	0.251 3961	9.940 6691	118	40	
	30	9.689 3105	376	9.748 6533	493	0.251 3467	9.940 6573	118	30	
	40	9.689 3481	375	9.748 7026	494	0.251 2974	9.940 6455	118	20	
	50	9.689 3856	376	9.748 7520	493	0.251 2480	9.940 6337	118	10	
17	0	9.689 4232	375	9.748 8013	494	0.251 1987	9.940 6219	119	0	43
	10	9.689 4607	376	9.748 8507	493	0.251 1493	9.940 6100	118	50	
	20	9.689 4983	375	9.748 9000	494	0.251 1000	9.940 5982	118	40	
	30	9.689 5358	375	9.748 9494	493	0.251 0506	9.940 5864	118	30	
	40	9.689 5733	376	9.748 9987	494	0.251 0013	9.940 5746	118	20	
	50	9.689 6109	375	9.749 0481	493	0.250 9519	9.940 5628	118	10	
18	0	9.689 6484	375	9.749 0974	493	0.250 9026	9.940 5510	118	0	42
	10	9.689 6859	375	9.749 1467	494	0.250 8533	9.940 5392	118	50	
	20	9.689 7234	375	9.749 1961	493	0.250 8039	9.940 5274	119	40	
	30	9.689 7609	375	9.749 2454	493	0.250 7546	9.940 5155	118	30	
	40	9.689 7984	375	9.749 2947	493	0.250 7053	9.940 5037	118	20	
	50	9.689 8359	375	9.749 3440	494	0.250 6560	9.940 4919	118	10	
19	0	9.689 8734	375	9.749 3934	493	0.250 6066	9.940 4801	119	0	41
	10	9.689 9109	375	9.749 4427	493	0.250 5573	9.940 4682	118	50	
	20	9.689 9484	375	9.749 4920	493	0.250 5080	9.940 4564	118	40	
	30	9.689 9859	375	9.749 5413	493	0.250 4587	9.940 4446	118	30	
	40	9.690 0234	375	9.749 5906	493	0.250 4094	9.940 4328	119	20	
	50	9.690 0609	374	9.749 6399	493	0.250 3601	9.940 4209	118	10	
20	0	9.690 0983		9.749 6892		0.250 3108	9.940 4091		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

60°

494	
1	49.4
2	98.8
3	148.2
4	197.6
5	247.0
6	296.4
7	345.8
8	395.2
9	444.6

493	
1	49.3
2	98.6
3	147.9
4	197.2
5	246.5
6	295.8
7	345.1
8	394.4
9	443.7

377	
1	37.7
2	75.4
3	113.1
4	150.8
5	188.5
6	226.2
7	263.9
8	301.6
9	339.3

376	
1	37.6
2	75.2
3	112.8
4	150.4
5	188.0
6	225.6
7	263.2
8	300.8
9	338.4

375	
1	37.5
2	75.0
3	112.5
4	150.0
5	187.5
6	225.0
7	262.5
8	300.0
9	337.5

118	
1	11.8
2	23.6
3	35.4
4	47.2
5	59.0
6	70.8
7	82.6
8	94.4
9	106.2

29°

493	
1	49.3
2	98.6
3	147.9
4	197.2
5	246.5
6	295.8
7	345.1
8	394.4
9	443.7

492	
1	49.2
2	98.4
3	147.6
4	196.8
5	246.0
6	295.2
7	344.4
8	393.6
9	442.8

375	
1	37.5
2	75.0
3	112.5
4	150.0
5	187.5
6	225.0
7	262.5
8	300.0
9	337.5

374	
1	37.4
2	74.8
3	112.2
4	149.6
5	187.0
6	224.4
7	261.8
8	299.2
9	336.6

373	
1	37.3
2	74.6
3	111.9
4	149.2
5	186.5
6	223.8
7	261.1
8	298.4
9	335.7

118	
1	11.8
2	23.6
3	35.4
4	47.2
5	59.0
6	70.8
7	82.6
8	94.4
9	106.2

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.690 0983	375	9.749 6892	493	0.250 3108	9.940 4091	118	0	40
	10	9.690 1358	375	9.749 7385	493	0.250 2615	9.940 3973	119	50	
	20	9.690 1733	374	9.749 7878	493	0.250 2122	9.940 3854	118	40	
	30	9.690 2107	375	9.749 8371	493	0.250 1629	9.940 3736	118	30	
	40	9.690 2482	374	9.749 8864	493	0.250 1136	9.940 3618	119	20	
	50	9.690 2856	375	9.749 9357	493	0.250 0643	9.940 3499	118	10	
21	0	9.690 3231	374	9.749 9850	493	0.250 0150	9.940 3381	119	0	39
	10	9.690 3605	374	9.750 0343	492	0.249 9657	9.940 3262	118	50	
	20	9.690 3979	375	9.750 0835	493	0.249 9165	9.940 3144	118	40	
	30	9.690 4354	374	9.750 1328	493	0.249 8672	9.940 3026	119	30	
	40	9.690 4728	374	9.750 1821	493	0.249 8179	9.940 2907	118	20	
	50	9.690 5102	374	9.750 2314	492	0.249 7686	9.940 2789	119	10	
22	0	9.690 5476	375	9.750 2806	493	0.249 7194	9.940 2670	118	0	38
	10	9.690 5851	374	9.750 3299	492	0.249 6701	9.940 2552	119	50	
	20	9.690 6225	374	9.750 3791	493	0.249 6209	9.940 2433	118	40	
	30	9.690 6599	374	9.750 4284	493	0.249 5716	9.940 2315	118	30	
	40	9.690 6973	374	9.750 4777	492	0.249 5223	9.940 2196	119	20	
	50	9.690 7347	374	9.750 5269	493	0.249 4731	9.940 2078	119	10	
23	0	9.690 7721	374	9.750 5762	492	0.249 4238	9.940 1959	118	0	37
	10	9.690 8095	374	9.750 6254	493	0.249 3746	9.940 1841	119	50	
	20	9.690 8469	373	9.750 6747	492	0.249 3253	9.940 1722	119	40	
	30	9.690 8842	374	9.750 7239	492	0.249 2761	9.940 1603	118	30	
	40	9.690 9216	374	9.750 7731	493	0.249 2269	9.940 1485	119	20	
	50	9.690 9590	374	9.750 8224	492	0.249 1776	9.940 1366	118	10	
24	0	9.690 9964	373	9.750 8716	492	0.249 1284	9.940 1248	119	0	36
	10	9.691 0337	374	9.750 9208	493	0.249 0792	9.940 1129	119	50	
	20	9.691 0711	373	9.750 9701	492	0.249 0299	9.940 1010	118	40	
	30	9.691 1084	374	9.751 0193	492	0.248 9807	9.940 0892	119	30	
	40	9.691 1458	373	9.751 0685	492	0.248 9315	9.940 0773	119	20	
	50	9.691 1831	374	9.751 1177	492	0.248 8823	9.940 0654	119	10	
25	0	9.691 2205	373	9.751 1669	492	0.248 8331	9.940 0535	118	0	35
	10	9.691 2578	374	9.751 2161	493	0.248 7839	9.940 0417	119	50	
	20	9.691 2952	373	9.751 2654	492	0.248 7346	9.940 0298	119	40	
	30	9.691 3325	373	9.751 3146	492	0.248 6854	9.940 0179	119	30	
	40	9.691 3698	373	9.751 3638	492	0.248 6362	9.940 0060	118	20	
	50	9.691 4071	374	9.751 4130	492	0.248 5870	9.939 9942	119	10	
26	0	9.691 4445	373	9.751 4622	492	0.248 5378	9.939 9823	119	0	34
	10	9.691 4818	373	9.751 5114	492	0.248 4886	9.939 9704	119	50	
	20	9.691 5191	373	9.751 5606	491	0.248 4394	9.939 9585	119	40	
	30	9.691 5564	373	9.751 6097	492	0.248 3903	9.939 9466	118	30	
	40	9.691 5937	373	9.751 6589	492	0.248 3411	9.939 9348	119	20	
	50	9.691 6310	373	9.751 7081	492	0.248 2919	9.939 9229	119	10	
27	0	9.691 6683	373	9.751 7573	492	0.248 2427	9.939 9110	119	0	33
	10	9.691 7056	372	9.751 8065	491	0.248 1935	9.939 8991	119	50	
	20	9.691 7428	373	9.751 8556	492	0.248 1444	9.939 8872	119	40	
	30	9.691 7801	373	9.751 9048	492	0.248 0952	9.939 8753	119	30	
	40	9.691 8174	373	9.751 9540	491	0.248 0460	9.939 8634	119	20	
	50	9.691 8547	372	9.752 0031	492	0.247 9969	9.939 8515	119	10	
28	0	9.691 8919	373	9.752 0523	492	0.247 9477	9.939 8396	119	0	32
	10	9.691 9292	373	9.752 1015	491	0.247 8985	9.939 8277	119	50	
	20	9.691 9665	372	9.752 1506	492	0.247 8494	9.939 8158	119	40	
	30	9.692 0037	373	9.752 1998	491	0.247 8002	9.939 8039	119	30	
	40	9.692 0410	372	9.752 2489	492	0.247 7511	9.939 7920	119	20	
	50	9.692 0782	373	9.752 2981	491	0.247 7019	9.939 7801	119	10	
29	0	9.692 1155	372	9.752 3472	492	0.247 6528	9.939 7682	119	0	31
	10	9.692 1527	372	9.752 3964	491	0.247 6036	9.939 7563	119	50	
	20	9.692 1899	373	9.752 4455	492	0.247 5545	9.939 7444	119	40	
	30	9.692 2272	372	9.752 4947	491	0.247 5053	9.939 7325	119	30	
	40	9.692 2644	372	9.752 5438	491	0.247 4562	9.939 7206	119	20	
	50	9.692 3016	372	9.752 5929	491	0.247 4071	9.939 7087	119	10	
30	0	9.692 3388		9.752 6420		0.247 3580	9.939 6968		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

60°

29°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.692 3388	372	9.752 6420	492	0.247 3580	9.939 6968	119	0	30
	10	9.692 3760	372	9.752 6912	491	0.247 3088	9.939 6849	120	50	
	20	9.692 4132	372	9.752 7403	491	0.247 2597	9.939 6729	119	40	
	30	9.692 4504	372	9.752 7894	491	0.247 2106	9.939 6610	119	30	
	40	9.692 4876	372	9.752 8385	491	0.247 1615	9.939 6491	119	20	
	50	9.692 5248	372	9.752 8876	492	0.247 1124	9.939 6372	119	10	
31	0	9.692 5620	372	9.752 9368	491	0.247 0632	9.939 6253	119	0	29
	10	9.692 5992	372	9.752 9859	491	0.247 0141	9.939 6134	120	50	
	20	9.692 6364	372	9.753 0350	491	0.246 9650	9.939 6014	119	40	
	30	9.692 6736	372	9.753 0841	491	0.246 9159	9.939 5895	119	30	
	40	9.692 7108	371	9.753 1332	491	0.246 8668	9.939 5776	119	20	
	50	9.692 7479	372	9.753 1823	491	0.246 8177	9.939 5657	120	10	
32	0	9.692 7851	372	9.753 2314	491	0.246 7686	9.939 5537	119	0	28
	10	9.692 8223	371	9.753 2805	491	0.246 7195	9.939 5418	119	50	
	20	9.692 8594	372	9.753 3296	490	0.246 6704	9.939 5299	120	40	
	30	9.692 8966	371	9.753 3786	491	0.246 6214	9.939 5179	119	30	
	40	9.692 9337	372	9.753 4277	491	0.246 5723	9.939 5060	119	20	
	50	9.692 9709	371	9.753 4768	491	0.246 5232	9.939 4941	120	10	
33	0	9.693 0080	371	9.753 5259	491	0.246 4741	9.939 4821	119	0	27
	10	9.693 0451	372	9.753 5750	490	0.246 4250	9.939 4702	119	50	
	20	9.693 0823	371	9.753 6240	491	0.246 3760	9.939 4583	120	40	
	30	9.693 1194	371	9.753 6731	491	0.246 3269	9.939 4463	119	30	
	40	9.693 1565	372	9.753 7222	490	0.246 2778	9.939 4344	120	20	
	50	9.693 1937	371	9.753 7712	491	0.246 2288	9.939 4224	119	10	
34	0	9.693 2308	371	9.753 8203	490	0.246 1797	9.939 4105	120	0	26
	10	9.693 2679	371	9.753 8693	491	0.246 1307	9.939 3985	119	50	
	20	9.693 3050	371	9.753 9184	490	0.246 0816	9.939 3866	120	40	
	30	9.693 3421	371	9.753 9674	491	0.246 0326	9.939 3746	119	30	
	40	9.693 3792	371	9.754 0165	490	0.245 9835	9.939 3627	120	20	
	50	9.693 4163	371	9.754 0655	491	0.245 9345	9.939 3507	119	10	
35	0	9.693 4534	371	9.754 1146	490	0.245 8854	9.939 3388	120	0	25
	10	9.693 4905	370	9.754 1636	491	0.245 8364	9.939 3268	119	50	
	20	9.693 5275	371	9.754 2127	490	0.245 7873	9.939 3149	120	40	
	30	9.693 5646	371	9.754 2617	490	0.245 7383	9.939 3029	119	30	
	40	9.693 6017	371	9.754 3107	491	0.245 6893	9.939 2910	120	20	
	50	9.693 6388	370	9.754 3598	490	0.245 6402	9.939 2790	119	10	
36	0	9.693 6758	371	9.754 4088	490	0.245 5912	9.939 2671	120	0	24
	10	9.693 7129	371	9.754 4578	490	0.245 5422	9.939 2551	120	50	
	20	9.693 7500	370	9.754 5068	490	0.245 4932	9.939 2431	119	40	
	30	9.693 7870	371	9.754 5558	491	0.245 4442	9.939 2312	120	30	
	40	9.693 8241	370	9.754 6049	490	0.245 3951	9.939 2192	120	20	
	50	9.693 8611	370	9.754 6539	490	0.245 3461	9.939 2072	119	10	
37	0	9.693 8981	371	9.754 7029	490	0.245 2971	9.939 1953	120	0	23
	10	9.693 9352	370	9.754 7519	490	0.245 2481	9.939 1833	120	50	
	20	9.693 9722	370	9.754 8009	490	0.245 1991	9.939 1713	120	40	
	30	9.694 0092	371	9.754 8499	490	0.245 1501	9.939 1593	119	30	
	40	9.694 0463	370	9.754 8989	490	0.245 1011	9.939 1474	120	20	
	50	9.694 0833	370	9.754 9479	490	0.245 0521	9.939 1354	120	10	
38	0	9.694 1203	370	9.754 9969	490	0.245 0031	9.939 1234	120	0	22
	10	9.694 1573	370	9.755 0459	490	0.244 9541	9.939 1114	119	50	
	20	9.694 1943	370	9.755 0949	489	0.244 9051	9.939 0995	120	40	
	30	9.694 2313	370	9.755 1438	490	0.244 8562	9.939 0875	120	30	
	40	9.694 2683	370	9.755 1928	490	0.244 8072	9.939 0755	120	20	
	50	9.694 3053	370	9.755 2418	490	0.244 7582	9.939 0635	120	10	
39	0	9.694 3423	370	9.755 2908	489	0.244 7092	9.939 0515	119	0	21
	10	9.694 3793	370	9.755 3397	490	0.244 6603	9.939 0396	120	50	
	20	9.694 4163	370	9.755 3887	490	0.244 6113	9.939 0276	120	40	
	30	9.694 4533	369	9.755 4377	489	0.244 5623	9.939 0156	120	30	
	40	9.694 4902	370	9.755 4866	490	0.244 5134	9.939 0036	120	20	
	50	9.694 5272	370	9.755 5356	490	0.244 4644	9.938 9916	120	10	
40	0	9.694 5642		9.755 5846		0.244 4154	9.938 9796		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

60°

30°

	491
1	49.1
2	98.2
3	147.3
4	196.4
5	245.5
6	294.6
7	343.7
8	392.8
9	441.9

	490
1	49.0
2	98.0
3	147.0
4	196.0
5	245.0
6	294.0
7	343.0
8	392.0
9	441.0

	372
1	37.2
2	74.4
3	111.6
4	148.8
5	186.0
6	223.2
7	260.4
8	297.6
9	334.8

	371
1	37.1
2	74.2
3	111.3
4	148.4
5	185.5
6	222.6
7	259.7
8	296.8
9	333.9

	370
1	37.0
2	74.0
3	111.0
4	148.0
5	185.0
6	222.0
7	259.0
8	296.0
9	333.0

	119
1	11.9
2	23.8
3	35.7
4	47.6
5	59.5
6	71.4
7	83.3
8	95.2
9	107.1

29°

489	488	369	368	367	120
1 48.9	1 48.8	1 36.9	1 36.8	1 36.7	1 12.0
2 97.8	2 97.6	2 73.8	2 73.6	2 73.4	2 24.0
3 146.7	3 146.4	3 110.7	3 110.4	3 110.1	3 36.0
4 195.6	4 195.2	4 147.6	4 147.2	4 146.8	4 48.0
5 244.5	5 244.0	5 184.5	5 184.0	5 183.5	5 60.0
6 293.4	6 292.8	6 221.4	6 220.8	6 220.2	6 72.0
7 342.3	7 341.6	7 258.3	7 257.6	7 256.9	7 84.0
8 391.2	8 390.4	8 295.2	8 294.4	8 293.6	8 96.0
9 440.1	9 439.2	9 332.1	9 331.2	9 330.3	9 108.0

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.694 5642	369	9.755 5846	489	0.244 4154	9.938 9796	120	0	20
	10	9.694 6011	370	9.755 6335	490	0.244 3665	9.938 9676	120	50	
	20	9.694 6381	369	9.755 6825	489	0.244 3175	9.938 9556	120	40	
	30	9.694 6750	370	9.755 7314	490	0.244 2686	9.938 9436	120	30	
	40	9.694 7120	369	9.755 7804	489	0.244 2196	9.938 9316	120	20	
	50	9.694 7489	370	9.755 8293	490	0.244 1707	9.938 9196	120	10	
41	0	9.694 7859	369	9.755 8783	489	0.244 1217	9.938 9076	120	0	19
	10	9.694 8228	369	9.755 9272	489	0.244 0728	9.938 8956	120	50	
	20	9.694 8597	370	9.755 9761	490	0.244 0239	9.938 8836	120	40	
	30	9.694 8967	369	9.756 0251	489	0.243 9749	9.938 8716	120	30	
	40	9.694 9336	369	9.756 0740	489	0.243 9260	9.938 8596	120	20	
	50	9.694 9705	369	9.756 1229	489	0.243 8771	9.938 8476	120	10	
42	0	9.695 0074	369	9.756 1718	490	0.243 8282	9.938 8356	120	0	18
	10	9.695 0443	370	9.756 2208	489	0.243 7792	9.938 8236	120	50	
	20	9.695 0813	369	9.756 2697	489	0.243 7303	9.938 8116	121	40	
	30	9.695 1182	369	9.756 3186	489	0.243 6814	9.938 7995	120	30	
	40	9.695 1551	368	9.756 3675	489	0.243 6325	9.938 7875	120	20	
	50	9.695 1919	369	9.756 4164	489	0.243 5836	9.938 7755	120	10	
43	0	9.695 2288	369	9.756 4653	489	0.243 5347	9.938 7635	120	0	17
	10	9.695 2657	369	9.756 5142	489	0.243 4858	9.938 7515	120	50	
	20	9.695 3026	369	9.756 5631	489	0.243 4369	9.938 7395	121	40	
	30	9.695 3395	369	9.756 6120	489	0.243 3880	9.938 7274	120	30	
	40	9.695 3764	368	9.756 6609	489	0.243 3391	9.938 7154	120	20	
	50	9.695 4132	369	9.756 7098	489	0.243 2902	9.938 7034	120	10	
44	0	9.695 4501	369	9.756 7587	489	0.243 2413	9.938 6914	121	0	16
	10	9.695 4870	368	9.756 8076	489	0.243 1924	9.938 6793	120	50	
	20	9.695 5238	369	9.756 8565	489	0.243 1435	9.938 6673	120	40	
	30	9.695 5607	368	9.756 9054	489	0.243 0946	9.938 6553	120	30	
	40	9.695 5975	369	9.756 9543	488	0.243 0457	9.938 6433	121	20	
	50	9.695 6344	368	9.757 0031	489	0.242 9969	9.938 6312	120	10	
45	0	9.695 6712	368	9.757 0520	489	0.242 9480	9.938 6192	120	0	15
	10	9.695 7080	369	9.757 1009	489	0.242 8991	9.938 6072	121	50	
	20	9.695 7449	368	9.757 1498	488	0.242 8502	9.938 5951	120	40	
	30	9.695 7817	368	9.757 1986	489	0.242 8014	9.938 5831	121	30	
	40	9.695 8185	368	9.757 2475	488	0.242 7525	9.938 5710	120	20	
	50	9.695 8553	369	9.757 2963	489	0.242 7037	9.938 5590	120	10	
46	0	9.695 8922	368	9.757 3452	489	0.242 6548	9.938 5470	121	0	14
	10	9.695 9290	368	9.757 3941	488	0.242 6059	9.938 5349	120	50	
	20	9.695 9658	368	9.757 4429	489	0.242 5571	9.938 5229	121	40	
	30	9.696 0026	368	9.757 4918	488	0.242 5082	9.938 5108	120	30	
	40	9.696 0394	368	9.757 5406	488	0.242 4594	9.938 4988	121	20	
	50	9.696 0762	368	9.757 5894	489	0.242 4106	9.938 4867	120	10	
47	0	9.696 1130	368	9.757 6383	488	0.242 3617	9.938 4747	121	0	13
	10	9.696 1498	367	9.757 6871	489	0.242 3129	9.938 4626	120	50	
	20	9.696 1865	368	9.757 7360	488	0.242 2640	9.938 4506	121	40	
	30	9.696 2233	368	9.757 7848	488	0.242 2152	9.938 4385	120	30	
	40	9.696 2601	368	9.757 8336	489	0.242 1664	9.938 4265	121	20	
	50	9.696 2969	367	9.757 8825	488	0.242 1175	9.938 4144	120	10	
48	0	9.696 3336	368	9.757 9313	488	0.242 0687	9.938 4024	121	0	12
	10	9.696 3704	368	9.757 9801	488	0.242 0199	9.938 3903	121	50	
	20	9.696 4072	367	9.758 0289	488	0.241 9711	9.938 3782	120	40	
	30	9.696 4439	368	9.758 0777	488	0.241 9223	9.938 3662	121	30	
	40	9.696 4807	367	9.758 1265	489	0.241 8735	9.938 3541	121	20	
	50	9.696 5174	367	9.758 1754	488	0.241 8246	9.938 3420	120	10	
49	0	9.696 5541	368	9.758 2242	488	0.241 7758	9.938 3300	121	0	11
	10	9.696 5909	367	9.758 2730	488	0.241 7270	9.938 3179	121	50	
	20	9.696 6276	367	9.758 3218	488	0.241 6782	9.938 3058	120	40	
	30	9.696 6643	368	9.758 3706	488	0.241 6294	9.938 2938	121	30	
	40	9.696 7011	367	9.758 4194	488	0.241 5806	9.938 2817	121	20	
	50	9.696 7378	367	9.758 4682	488	0.241 5318	9.938 2696	120	10	
50	0	9.696 7745		9.758 5170		0.241 4830	9.938 2576		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

60°

29°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.696 7745	367	9.758 5170	487	0.241 4830	9.938 2576	121	0	10
	10	9.696 8112	367	9.758 5657	488	0.241 4343	9.938 2455	121	50	
	20	9.696 8479	367	9.758 6145	488	0.241 3855	9.938 2334	121	40	
	30	9.696 8846	367	9.758 6633	488	0.241 3367	9.938 2213	121	30	
	40	9.696 9213	367	9.758 7121	488	0.241 2879	9.938 2092	120	20	
	50	9.696 9580	367	9.758 7609	487	0.241 2391	9.938 1972	121	10	
51	0	9.696 9947	367	9.758 8096	488	0.241 1904	9.938 1851	121	0	9
	10	9.697 0314	367	9.758 8584	488	0.241 1416	9.938 1730	121	50	
	20	9.697 0681	367	9.758 9072	487	0.241 0928	9.938 1609	121	40	
	30	9.697 1048	367	9.758 9559	488	0.241 0441	9.938 1488	121	30	
	40	9.697 1415	366	9.759 0047	488	0.240 9953	9.938 1367	120	20	
	50	9.697 1781	367	9.759 0535	487	0.240 9465	9.938 1247	121	10	
52	0	9.697 2148	367	9.759 1022	488	0.240 8978	9.938 1126	121	0	8
	10	9.697 2515	366	9.759 1510	487	0.240 8490	9.938 1005	121	50	
	20	9.697 2881	367	9.759 1997	488	0.240 8003	9.938 0884	121	40	
	30	9.697 3248	366	9.759 2485	487	0.240 7515	9.938 0763	121	30	
	40	9.697 3614	367	9.759 2972	488	0.240 7028	9.938 0642	121	20	
	50	9.697 3981	366	9.759 3460	487	0.240 6540	9.938 0521	121	10	
53	0	9.697 4347	366	9.759 3947	488	0.240 6053	9.938 0400	121	0	7
	10	9.697 4713	367	9.759 4435	487	0.240 5565	9.938 0279	121	50	
	20	9.697 5080	366	9.759 4922	487	0.240 5078	9.938 0158	121	40	
	30	9.697 5446	366	9.759 5409	488	0.240 4591	9.938 0037	121	30	
	40	9.697 5812	367	9.759 5897	487	0.240 4103	9.937 9916	121	20	
	50	9.697 6179	366	9.759 6384	487	0.240 3616	9.937 9795	121	10	
54	0	9.697 6545	366	9.759 6871	487	0.240 3129	9.937 9674	121	0	6
	10	9.697 6911	366	9.759 7358	487	0.240 2642	9.937 9553	121	50	
	20	9.697 7277	366	9.759 7845	488	0.240 2155	9.937 9432	122	40	
	30	9.697 7643	366	9.759 8333	487	0.240 1667	9.937 9310	121	30	
	40	9.697 8009	366	9.759 8820	487	0.240 1180	9.937 9189	121	20	
	50	9.697 8375	366	9.759 9307	487	0.240 0693	9.937 9068	121	10	
55	0	9.697 8741	366	9.759 9794	487	0.240 0206	9.937 8947	121	0	5
	10	9.697 9107	366	9.760 0281	487	0.239 9719	9.937 8826	121	50	
	20	9.697 9473	366	9.760 0768	487	0.239 9232	9.937 8705	121	40	
	30	9.697 9839	365	9.760 1255	487	0.239 8745	9.937 8584	122	30	
	40	9.698 0204	366	9.760 1742	487	0.239 8258	9.937 8462	121	20	
	50	9.698 0570	366	9.760 2229	487	0.239 7771	9.937 8341	121	10	
56	0	9.698 0936	365	9.760 2716	487	0.239 7284	9.937 8220	121	0	4
	10	9.698 1301	366	9.760 3203	487	0.239 6797	9.937 8099	122	50	
	20	9.698 1667	366	9.760 3690	486	0.239 6310	9.937 7977	121	40	
	30	9.698 2033	365	9.760 4176	487	0.239 5824	9.937 7856	121	30	
	40	9.698 2398	366	9.760 4663	487	0.239 5337	9.937 7735	121	20	
	50	9.698 2764	365	9.760 5150	487	0.239 4850	9.937 7614	122	10	
57	0	9.698 3129	365	9.760 5637	487	0.239 4363	9.937 7492	121	0	3
	10	9.698 3494	366	9.760 6124	486	0.239 3876	9.937 7371	121	50	
	20	9.698 3860	365	9.760 6610	487	0.239 3390	9.937 7250	122	40	
	30	9.698 4225	365	9.760 7097	487	0.239 2903	9.937 7128	121	30	
	40	9.698 4590	366	9.760 7584	486	0.239 2416	9.937 7007	122	20	
	50	9.698 4956	365	9.760 8070	487	0.239 1930	9.937 6885	121	10	
58	0	9.698 5321	365	9.760 8557	486	0.239 1443	9.937 6764	121	0	2
	10	9.698 5686	365	9.760 9043	487	0.239 0957	9.937 6643	122	50	
	20	9.698 6051	365	9.760 9530	486	0.239 0470	9.937 6521	121	40	
	30	9.698 6416	365	9.761 0016	487	0.238 9984	9.937 6400	122	30	
	40	9.698 6781	365	9.761 0503	486	0.238 9497	9.937 6278	121	20	
	50	9.698 7146	365	9.761 0989	487	0.238 9011	9.937 6157	122	10	
59	0	9.698 7511	365	9.761 1476	486	0.238 8524	9.937 6035	121	0	1
	10	9.698 7876	365	9.761 1962	487	0.238 8038	9.937 5914	122	50	
	20	9.698 8241	365	9.761 2449	486	0.238 7551	9.937 5792	121	40	
	30	9.698 8606	365	9.761 2935	486	0.238 7065	9.937 5671	122	30	
	40	9.698 8971	364	9.761 3421	486	0.238 6579	9.937 5549	121	20	
	50	9.698 9335	365	9.761 3907	487	0.238 6093	9.937 5428	122	10	
60	0	9.698 9700		9.761 4394		0.238 5606	9.937 5306		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

60°

	487	486	366	365	121	122
1	48.7	48.6	36.6	36.5	12.1	12.2
2	97.4	97.2	73.2	73.0	24.2	24.4
3	146.1	145.8	109.8	109.5	36.3	36.6
4	194.8	194.4	146.4	146.0	48.4	48.8
5	243.5	243.0	183.0	182.5	60.5	61.0
6	292.2	291.6	219.6	219.0	72.6	73.2
7	340.9	340.2	256.2	255.5	84.7	85.4
8	389.6	388.8	292.8	292.0	96.8	97.6
9	438.3	437.4	329.4	328.5	108.9	109.8

30°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.698 9700	365	9.761 4394	486	0.238 5606	9.937 5306	121	0	60
	10	9.699 0065	364	9.761 4880	486	0.238 5120	9.937 5185	122	50	
	20	9.699 0429	365	9.761 5366	486	0.238 4634	9.937 5063	121	40	
	30	9.699 0794	364	9.761 5852	487	0.238 4148	9.937 4942	122	30	
	40	9.699 1158	365	9.761 6339	486	0.238 3661	9.937 4820	122	20	
	50	9.699 1523	364	9.761 6825	486	0.238 3175	9.937 4698	121	10	
1	0	9.699 1887	365	9.761 7311	486	0.238 2689	9.937 4577	122	0	59
	10	9.699 2252	364	9.761 7797	486	0.238 2203	9.937 4455	122	50	
	20	9.699 2616	365	9.761 8283	486	0.238 1717	9.937 4333	121	40	
	30	9.699 2981	364	9.761 8769	486	0.238 1231	9.937 4212	122	30	
	40	9.699 3345	364	9.761 9255	486	0.238 0745	9.937 4090	122	20	
	50	9.699 3709	364	9.761 9741	486	0.238 0259	9.937 3968	121	10	
2	0	9.699 4073	365	9.762 0227	486	0.237 9773	9.937 3847	122	0	58
	10	9.699 4438	364	9.762 0713	486	0.237 9287	9.937 3725	122	50	
	20	9.699 4802	364	9.762 1199	485	0.237 8801	9.937 3603	122	40	
	30	9.699 5166	364	9.762 1684	486	0.237 8316	9.937 3481	121	30	
	40	9.699 5530	364	9.762 2170	486	0.237 7830	9.937 3360	122	20	
	50	9.699 5894	364	9.762 2656	486	0.237 7344	9.937 3238	122	10	
3	0	9.699 6258	364	9.762 3142	486	0.237 6858	9.937 3116	122	0	57
	10	9.699 6622	364	9.762 3628	485	0.237 6372	9.937 2994	122	50	
	20	9.699 6986	363	9.762 4113	486	0.237 5887	9.937 2872	121	40	
	30	9.699 7349	364	9.762 4599	486	0.237 5401	9.937 2751	122	30	
	40	9.699 7713	364	9.762 5085	485	0.237 4915	9.937 2629	122	20	
	50	9.699 8077	364	9.762 5570	486	0.237 4430	9.937 2507	122	10	
4	0	9.699 8441	363	9.762 6056	485	0.237 3944	9.937 2385	122	0	56
	10	9.699 8804	364	9.762 6541	486	0.237 3459	9.937 2263	122	50	
	20	9.699 9168	364	9.762 7027	486	0.237 2973	9.937 2141	122	40	
	30	9.699 9532	363	9.762 7513	485	0.237 2487	9.937 2019	122	30	
	40	9.699 9895	364	9.762 7998	486	0.237 2002	9.937 1897	122	20	
	50	9.700 0259	363	9.762 8484	485	0.237 1516	9.937 1775	122	10	
5	0	9.700 0622	364	9.762 8969	485	0.237 1031	9.937 1653	122	0	55
	10	9.700 0986	363	9.762 9454	486	0.237 0546	9.937 1531	122	50	
	20	9.700 1349	364	9.762 9940	485	0.237 0060	9.937 1409	122	40	
	30	9.700 1713	363	9.763 0425	486	0.236 9575	9.937 1287	122	30	
	40	9.700 2076	363	9.763 0911	485	0.236 9089	9.937 1165	122	20	
	50	9.700 2439	363	9.763 1396	485	0.236 8604	9.937 1043	122	10	
6	0	9.700 2802	364	9.763 1881	485	0.236 8119	9.937 0921	122	0	54
	10	9.700 3166	363	9.763 2366	486	0.236 7634	9.937 0799	122	50	
	20	9.700 3529	363	9.763 2852	485	0.236 7148	9.937 0677	122	40	
	30	9.700 3892	363	9.763 3337	485	0.236 6663	9.937 0555	122	30	
	40	9.700 4255	363	9.763 3822	485	0.236 6178	9.937 0433	122	20	
	50	9.700 4618	363	9.763 4307	485	0.236 5693	9.937 0311	122	10	
7	0	9.700 4981	363	9.763 4792	485	0.236 5208	9.937 0189	122	0	53
	10	9.700 5344	363	9.763 5277	485	0.236 4723	9.937 0067	123	50	
	20	9.700 5707	363	9.763 5762	485	0.236 4238	9.936 9944	122	40	
	30	9.700 6070	363	9.763 6247	485	0.236 3753	9.936 9822	122	30	
	40	9.700 6433	362	9.763 6732	485	0.236 3268	9.936 9700	122	20	
	50	9.700 6795	363	9.763 7217	485	0.236 2783	9.936 9578	122	10	
8	0	9.700 7158	363	9.763 7702	485	0.236 2298	9.936 9456	123	0	52
	10	9.700 7521	362	9.763 8187	485	0.236 1813	9.936 9333	122	50	
	20	9.700 7883	363	9.763 8672	485	0.236 1328	9.936 9211	122	40	
	30	9.700 8246	363	9.763 9157	485	0.236 0843	9.936 9089	122	30	
	40	9.700 8609	362	9.763 9642	485	0.236 0358	9.936 8967	123	20	
	50	9.700 8971	363	9.764 0127	485	0.235 9873	9.936 8844	122	10	
9	0	9.700 9334	362	9.764 0612	484	0.235 9388	9.936 8722	122	0	51
	10	9.700 9696	363	9.764 1096	485	0.235 8904	9.936 8600	123	50	
	20	9.701 0059	362	9.764 1581	485	0.235 8419	9.936 8477	122	40	
	30	9.701 0421	362	9.764 2066	485	0.235 7934	9.936 8355	122	30	
	40	9.701 0783	363	9.764 2551	484	0.235 7449	9.936 8233	123	20	
	50	9.701 1146	362	9.764 3035	485	0.235 6965	9.936 8110	122	10	
10	0	9.701 1508		9.764 3520		0.235 6480	9.936 7988		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

486	
1	48.6
2	97.2
3	145.8
4	194.4
5	243.0
6	291.6
7	340.2
8	388.8
9	437.4

485	
1	48.5
2	97.0
3	145.5
4	194.0
5	242.5
6	291.0
7	339.5
8	388.0
9	436.5

365	
1	36.5
2	73.0
3	109.5
4	146.0
5	182.5
6	219.0
7	255.5
8	292.0
9	328.5

364	
1	36.4
2	72.8
3	109.2
4	145.6
5	182.0
6	218.4
7	254.8
8	291.2
9	327.6

363	
1	36.3
2	72.6
3	108.9
4	145.2
5	181.5
6	217.8
7	254.1
8	290.4
9	326.7

122	
1	12.2
2	24.4
3	36.6
4	48.8
5	61.0
6	73.2
7	85.4
8	97.6
9	109.8

59°

30°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.701 1508	362	9.764 3520	485	0.235 6480	9.936 7988	122	0	50
	10	9.701 1870	362	9.764 4005	484	0.235 5995	9.936 7866	123	50	
	20	9.701 2232	363	9.764 4489	485	0.235 5511	9.936 7743	122	40	
	30	9.701 2595	362	9.764 4974	484	0.235 5026	9.936 7621	123	30	
	40	9.701 2957	362	9.764 5458	485	0.235 4542	9.936 7498	122	20	
	50	9.701 3319	362	9.764 5943	484	0.235 4057	9.936 7376	122	10	
11	0	9.701 3681	362	9.764 6427	485	0.235 3573	9.936 7254	123	0	49
	10	9.701 4043	362	9.764 6912	484	0.235 3088	9.936 7131	122	50	
	20	9.701 4405	362	9.764 7396	485	0.235 2604	9.936 7009	123	40	
	30	9.701 4767	361	9.764 7881	484	0.235 2119	9.936 6886	122	30	
	40	9.701 5128	362	9.764 8365	484	0.235 1635	9.936 6764	123	20	
	50	9.701 5490	362	9.764 8849	485	0.235 1151	9.936 6641	122	10	
12	0	9.701 5852	362	9.764 9334	484	0.235 0666	9.936 6519	123	0	48
	10	9.701 6214	362	9.764 9818	484	0.235 0182	9.936 6396	123	50	
	20	9.701 6576	361	9.765 0302	484	0.234 9698	9.936 6273	122	40	
	30	9.701 6937	362	9.765 0786	485	0.234 9214	9.936 6151	123	30	
	40	9.701 7299	361	9.765 1271	484	0.234 8729	9.936 6028	122	20	
	50	9.701 7660	362	9.765 1755	484	0.234 8245	9.936 5906	123	10	
13	0	9.701 8022	361	9.765 2239	484	0.234 7761	9.936 5783	123	0	47
	10	9.701 8383	362	9.765 2723	484	0.234 7277	9.936 5660	122	50	
	20	9.701 8745	361	9.765 3207	484	0.234 6793	9.936 5538	123	40	
	30	9.701 9106	362	9.765 3691	484	0.234 6309	9.936 5415	123	30	
	40	9.701 9468	361	9.765 4175	484	0.234 5825	9.936 5292	122	20	
	50	9.701 9829	361	9.765 4659	484	0.234 5341	9.936 5170	123	10	
14	0	9.702 0190	362	9.765 5143	484	0.234 4857	9.936 5047	123	0	46
	10	9.702 0552	361	9.765 5627	484	0.234 4373	9.936 4924	122	50	
	20	9.702 0913	361	9.765 6111	484	0.234 3889	9.936 4802	123	40	
	30	9.702 1274	361	9.765 6595	484	0.234 3405	9.936 4679	123	30	
	40	9.702 1635	361	9.765 7079	484	0.234 2921	9.936 4556	123	20	
	50	9.702 1996	361	9.765 7563	484	0.234 2437	9.936 4433	122	10	
15	0	9 702 2357	361	9.765 8047	484	0.234 1953	9.936 4311	123	0	45
	10	9.702 2718	361	9.765 8531	483	0.234 1469	9.936 4188	123	50	
	20	9.702 3079	361	9.765 9014	484	0.234 0986	9.936 4065	123	40	
	30	9.702 3440	361	9.765 9498	484	0.234 0502	9.936 3942	123	30	
	40	9.702 3801	361	9.765 9982	484	0.234 0018	9.936 3819	123	20	
	50	9.702 4162	361	9.766 0466	483	0.233 9534	9.936 3696	122	10	
16	0	9.702 4523	361	9.766 0949	484	0.233 9051	9.936 3574	123	0	44
	10	9.702 4884	360	9.766 1433	484	0.233 8567	9.936 3451	123	50	
	20	9.702 5244	361	9.766 1917	483	0.233 8083	9.936 3328	123	40	
	30	9.702 5605	361	9.766 2400	484	0.233 7600	9.936 3205	123	30	
	40	9.702 5966	360	9.766 2884	483	0.233 7116	9.936 3082	123	20	
	50	9.702 6326	361	9.766 3367	484	0.233 6633	9.936 2959	123	10	
17	0	9.702 6687	360	9.766 3851	483	0.233 6149	9.936 2836	123	0	43
	10	9.702 7047	361	9.766 4334	484	0.233 5666	9.936 2713	123	50	
	20	9.702 7408	360	9.766 4818	483	0.233 5182	9.936 2590	123	40	
	30	9.702 7768	361	9.766 5301	484	0.233 4699	9.936 2467	123	30	
	40	9.702 8129	360	9.766 5785	483	0.233 4215	9.936 2344	123	20	
	50	9.702 8489	360	9.766 6268	483	0.233 3732	9.936 2221	123	10	
18	0	9.702 8849	361	9.766 6751	484	0.233 3249	9.936 2098	123	0	42
	10	9.702 9210	360	9.766 7235	483	0.233 2765	9.936 1975	123	50	
	20	9.702 9570	360	9.766 7718	483	0.233 2282	9.936 1852	123	40	
	30	9.702 9930	360	9.766 8201	484	0.233 1799	9.936 1729	123	30	
	40	9.703 0290	361	9.766 8685	483	0.233 1315	9.936 1606	123	20	
	50	9.703 0651	360	9.766 9168	483	0.233 0832	9.936 1483	123	10	
19	0	9.703 1011	360	9.766 9651	483	0.233 0349	9.936 1360	124	0	41
	10	9.703 1371	360	9.767 0134	483	0.232 9866	9.936 1236	123	50	
	20	9.703 1731	360	9.767 0617	484	0.232 9383	9.936 1113	123	40	
	30	9.703 2091	360	9.767 1101	483	0.232 8899	9.936 0990	123	30	
	40	9.703 2451	360	9.767 1584	483	0.232 8416	9.936 0867	123	20	
	50	9.703 2811	359	9.767 2067	483	0.232 7933	9.936 0744	123	10	
20	0	9.703 3170		9.767 2550		0.232 7450	9.936 0621		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

59°

	484
1	48.4
2	96.8
3	145.2
4	193.6
5	242.0
6	290.4
7	338.8
8	387.2
9	435.6

	483
1	48.3
2	96.6
3	144.9
4	193.2
5	241.5
6	289.8
7	338.1
8	386.4
9	434.7

	362
1	36.2
2	72.4
3	108.6
4	144.8
5	181.0
6	217.2
7	253.4
8	289.6
9	325.8

	361
1	36.1
2	72.2
3	108.3
4	144.4
5	180.5
6	216.6
7	252.7
8	288.8
9	324.9

	360
1	36.0
2	72.0
3	108.0
4	144.0
5	180.0
6	216.0
7	252.0
8	288.0
9	324.0

	123
1	12.3
2	24.6
3	36.9
4	49.2
5	61.5
6	73.8
7	86.1
8	98.4
9	110.7

30°

483	482	359	358	123	124
1 48.3	1 48.2	1 35.9	1 35.8	1 12.3	1 12.4
2 96.6	2 96.4	2 71.8	2 71.6	2 24.6	2 24.8
3 144.9	3 144.6	3 107.7	3 107.4	3 36.9	3 37.2
4 193.2	4 192.8	4 143.6	4 143.2	4 49.2	4 49.6
5 241.5	5 241.0	5 179.5	5 179.0	5 61.5	5 62.0
6 289.8	6 289.2	6 215.4	6 214.8	6 73.8	6 74.4
7 338.1	7 337.4	7 251.3	7 250.6	7 86.1	7 86.8
8 386.4	8 385.6	8 287.2	8 286.4	8 98.4	8 99.2
9 434.7	9 433.8	9 323.1	9 322.2	9 110.7	9 111.6

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.703 3170	360	9.767 2550	483	0.232 7450	9.936 0621	124	0	40
	10	9.703 3530	360	9.767 3033	483	0.232 6967	9.936 0497	123	50	
	20	9.703 3890	360	9.767 3516	483	0.232 6484	9.936 0374	123	40	
	30	9.703 4250	359	9.767 3999	483	0.232 6001	9.936 0251	123	30	
	40	9.703 4609	360	9.767 4482	483	0.232 5518	9.936 0128	124	20	
	50	9.703 4969	360	9.767 4965	483	0.232 5035	9.936 0004	123	10	
21	0	9.703 5329	359	9.767 5448	482	0.232 4552	9.935 9881	123	0	39
	10	9.703 5688	360	9.767 5930	483	0.232 4070	9.935 9758	123	50	
	20	9.703 6048	359	9.767 6413	483	0.232 3587	9.935 9635	124	40	
	30	9.703 6407	360	9.767 6896	483	0.232 3104	9.935 9511	123	30	
	40	9.703 6767	359	9.767 7379	483	0.232 2621	9.935 9388	123	20	
	50	9.703 7126	360	9.767 7862	482	0.232 2138	9.935 9265	124	10	
22	0	9.703 7486	359	9.767 8344	483	0.232 1656	9.935 9141	123	0	38
	10	9.703 7845	359	9.767 8827	483	0.232 1173	9.935 9018	124	50	
	20	9.703 8204	359	9.767 9310	482	0.232 0690	9.935 8894	123	40	
	30	9.703 8563	360	9.767 9792	483	0.232 0208	9.935 8771	123	30	
	40	9.703 8923	359	9.768 0275	483	0.231 9725	9.935 8648	124	20	
	50	9.703 9282	359	9.768 0758	482	0.231 9242	9.935 8524	123	10	
23	0	9.703 9641	359	9.768 1240	483	0.231 8760	9.935 8401	124	0	37
	10	9.704 0000	359	9.768 1723	482	0.231 8277	9.935 8277	123	50	
	20	9.704 0359	359	9.768 2205	483	0.231 7795	9.935 8154	124	40	
	30	9.704 0718	359	9.768 2688	482	0.231 7312	9.935 8030	123	30	
	40	9.704 1077	359	9.768 3170	483	0.231 6830	9.935 7907	124	20	
	50	9.704 1436	359	9.768 3653	482	0.231 6347	9.935 7783	123	10	
24	0	9.704 1795	359	9.768 4135	482	0.231 5865	9.935 7660	124	0	36
	10	9.704 2154	359	9.768 4617	483	0.231 5383	9.935 7536	123	50	
	20	9.704 2513	358	9.768 5100	482	0.231 4900	9.935 7413	124	40	
	30	9.704 2871	359	9.768 5582	483	0.231 4418	9.935 7289	123	30	
	40	9.704 3230	359	9.768 6065	482	0.231 3935	9.935 7166	124	20	
	50	9.704 3589	358	9.768 6547	482	0.231 3453	9.935 7042	124	10	
25	0	9.704 3947	359	9.768 7029	482	0.231 2971	9.935 6918	123	0	35
	10	9.704 4306	359	9.768 7511	483	0.231 2489	9.935 6795	124	50	
	20	9.704 4665	358	9.768 7994	482	0.231 2006	9.935 6671	123	40	
	30	9.704 5023	359	9.768 8476	482	0.231 1524	9.935 6548	124	30	
	40	9.704 5382	358	9.768 8958	482	0.231 1042	9.935 6424	124	20	
	50	9.704 5740	359	9.768 9440	482	0.231 0560	9.935 6300	123	10	
26	0	9.704 6099	358	9.768 9922	482	0.231 0078	9.935 6177	124	0	34
	10	9.704 6457	358	9.769 0404	482	0.230 9596	9.935 6053	124	50	
	20	9.704 6815	359	9.769 0886	482	0.230 9114	9.935 5929	124	40	
	30	9.704 7174	358	9.769 1368	482	0.230 8632	9.935 5805	123	30	
	40	9.704 7532	358	9.769 1850	482	0.230 8150	9.935 5682	124	20	
	50	9.704 7890	358	9.769 2332	482	0.230 7668	9.935 5558	124	10	
27	0	9.704 8248	358	9.769 2814	482	0.230 7186	9.935 5434	124	0	33
	10	9.704 8606	359	9.769 3296	482	0.230 6704	9.935 5310	123	50	
	20	9.704 8965	358	9.769 3778	482	0.230 6222	9.935 5187	124	40	
	30	9.704 9323	358	9.769 4260	482	0.230 5740	9.935 5063	124	30	
	40	9.704 9681	358	9.769 4742	482	0.230 5258	9.935 4939	124	20	
	50	9.705 0039	358	9.769 5224	481	0.230 4776	9.935 4815	124	10	
28	0	9.705 0397	357	9.769 5705	482	0.230 4295	9.935 4691	124	0	32
	10	9.705 0754	358	9.769 6187	482	0.230 3813	9.935 4567	124	50	
	20	9.705 1112	358	9.769 6669	482	0.230 3331	9.935 4443	123	40	
	30	9.705 1470	358	9.769 7151	481	0.230 2849	9.935 4320	124	30	
	40	9.705 1828	358	9.769 7632	482	0.230 2368	9.935 4196	124	20	
	50	9.705 2186	357	9.769 8114	482	0.230 1886	9.935 4072	124	10	
29	0	9.705 2543	358	9.769 8596	481	0.230 1404	9.935 3948	124	0	31
	10	9 705 2901	358	9.769 9077	482	0.230 0923	9.935 3824	124	50	
	20	9.705 3259	357	9.769 9559	481	0.230 0441	9.935 3700	124	40	
	30	9.705 3616	358	9.770 0040	482	0.229 9960	9.935 3576	124	30	
	40	9.705 3974	357	9.770 0522	481	0.229 9478	9.935 3452	124	20	
	50	9.705 4331	358	9.770 1003	482	0.229 8997	9.935 3328	124	10	
30	0	9.705 4689		9.770 1485		0.229 8515	9.935 3204		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

59°

30°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.705 4689	357	9.770 1485	481	0.229 8515	9.935 3204	124	0	30
	10	9.705 5046	358	9.770 1966	482	0.229 8034	9.935 3080	124	50	
	20	9.705 5404	357	9.770 2448	481	0.229 7552	9.935 2956	124	40	
	30	9.705 5761	357	9.770 2929	482	0.229 7071	9.935 2832	124	30	
	40	9.705 6118	357	9.770 3411	481	0.229 6589	9.935 2708	124	20	
	50	9.705 6475	358	9.770 3892	481	0.229 6108	9.935 2584	125	10	
31	0	9.705 6833	357	9.770 4373	482	0.229 5627	9.935 2459	124	0	29
	10	9.705 7190	357	9.770 4855	481	0.229 5145	9.935 2335	124	50	
	20	9.705 7547	357	9.770 5336	481	0.229 4664	9.935 2211	124	40	
	30	9.705 7904	357	9.770 5817	481	0.229 4183	9.935 2087	124	30	
	40	9.705 8261	357	9.770 6298	481	0.229 3702	9.935 1963	124	20	
	50	9.705 8618	357	9.770 6779	482	0.229 3221	9.935 1839	124	10	
32	0	9.705 8975	357	9.770 7261	481	0.229 2739	9.935 1715	125	0	28
	10	9.705 9332	357	9.770 7742	481	0.229 2258	9.935 1590	124	50	
	20	9.705 9689	357	9.770 8223	481	0.229 1777	9.935 1466	124	40	
	30	9.706 0046	357	9.770 8704	481	0.229 1296	9.935 1342	124	30	
	40	9.706 0403	357	9.770 9185	481	0.229 0815	9.935 1218	125	20	
	50	9.706 0760	356	9.770 9666	481	0.229 0334	9.935 1093	124	10	
33	0	9.706 1116	357	9.771 0147	481	0.228 9853	9.935 0969	124	0	27
	10	9.706 1473	357	9.771 0628	481	0.228 9372	9.935 0845	124	50	
	20	9.706 1830	356	9.771 1109	481	0.228 8891	9.935 0721	125	40	
	30	9.706 2186	357	9.771 1590	481	0.228 8410	9.935 0596	124	30	
	40	9.706 2543	357	9.771 2071	481	0.228 7929	9.935 0472	124	20	
	50	9.706 2900	356	9.771 2552	481	0.228 7448	9.935 0348	125	10	
34	0	9.706 3256	357	9.771 3033	481	0.228 6967	9.935 0223	124	0	26
	10	9.706 3613	356	9.771 3514	480	0.228 6486	9.935 0099	124	50	
	20	9.706 3969	356	9.771 3994	481	0.228 6006	9.934 9975	125	40	
	30	9.706 4325	357	9.771 4475	481	0.228 5525	9.934 9850	124	30	
	40	9.706 4682	356	9.771 4956	481	0.228 5044	9.934 9726	125	20	
	50	9.706 5038	356	9.771 5437	480	0.228 4563	9.934 9601	124	10	
35	0	9.706 5394	357	9.771 5917	481	0.228 4083	9.934 9477	124	0	25
	10	9.706 5751	356	9.771 6398	481	0.228 3602	9.934 9353	125	50	
	20	9.706 6107	356	9.771 6879	480	0.228 3121	9.934 9228	124	40	
	30	9.706 6463	356	9.771 7359	481	0.228 2641	9.934 9104	125	30	
	40	9.706 6819	356	9.771 7840	481	0.228 2160	9.934 8979	124	20	
	50	9.706 7175	356	9.771 8321	480	0.228 1679	9.934 8855	125	10	
36	0	9.706 7531	356	9.771 8801	481	0.228 1199	9.934 8730	124	0	24
	10	9.706 7887	356	9.771 9282	480	0.228 0718	9.934 8606	125	50	
	20	9.706 8243	356	9.771 9762	481	0.228 0238	9.934 8481	125	40	
	30	9.706 8599	356	9.772 0243	480	0.227 9757	9.934 8356	124	30	
	40	9.706 8955	356	9.772 0723	480	0.227 9277	9.934 8232	125	20	
	50	9.706 9311	356	9.772 1203	481	0.227 8797	9.934 8107	124	10	
37	0	9.706 9667	355	9.772 1684	480	0.227 8316	9.934 7983	125	0	23
	10	9.707 0022	356	9.772 2164	481	0.227 7836	9.934 7858	125	50	
	20	9.707 0378	356	9.772 2645	480	0.227 7355	9.934 7733	124	40	
	30	9.707 0734	355	9.772 3125	480	0.227 6875	9.934 7609	125	30	
	40	9.707 1089	356	9.772 3605	481	0.227 6395	9.934 7484	124	20	
	50	9.707 1445	356	9.772 4086	480	0.227 5914	9.934 7360	125	10	
38	0	9.707 1801	355	9.772 4566	480	0.227 5434	9.934 7235	125	0	22
	10	9.707 2156	356	9.772 5046	480	0.227 4954	9.934 7110	125	50	
	20	9.707 2512	355	9.772 5526	480	0.227 4474	9.934 6985	124	40	
	30	9.707 2867	356	9.772 6006	481	0.227 3994	9.934 6861	125	30	
	40	9.707 3223	355	9.772 6487	480	0.227 3513	9.934 6736	125	20	
	50	9.707 3578	355	9.772 6967	480	0.227 3033	9.934 6611	125	10	
39	0	9.707 3933	356	9.772 7447	480	0.227 2553	9.934 6486	124	0	21
	10	9.707 4289	355	9.772 7927	480	0.227 2073	9.934 6362	125	50	
	20	9.707 4644	355	9.772 8407	480	0.227 1593	9.934 6237	125	40	
	30	9.707 4999	355	9.772 8887	480	0.227 1113	9.934 6112	125	30	
	40	9.707 5354	355	9.772 9367	480	0.227 0633	9.934 5987	125	20	
	50	9.707 5709	355	9.772 9847	480	0.227 0153	9.934 5862	124	10	
40	0	9.707 6064		9.773 0327		0.226 9673	9.934 5738		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin.	d.	″	′

59°

	481
1	48.1
2	96.2
3	144.3
4	192.4
5	240.5
6	288.6
7	336.7
8	384.8
9	432.

	480
1	48.0
2	96.0
3	144.0
4	192.0
5	240.0
6	288.0
7	336.0
8	384.0
9	432.0

	357
1	35.7
2	71.4
3	107.1
4	142.8
5	178.5
6	214.2
7	249.9
8	285.6
9	321.3

	356
1	35.6
2	71.2
3	106.8
4	142.4
5	178.0
6	213.6
7	249.2
8	284.8
9	320.4

	355
1	35.5
2	71.0
3	106.5
4	142.0
5	177.5
6	213.0
7	248.5
8	284.0
9	319.5

	125
1	12.5
2	25.0
3	37.5
4	50.0
5	62.5
6	75.0
7	87.5
8	100.0
9	112.5

30°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.707 6064	355	9.773 0327	480	0.226 9673	9.934 5738	125	0	20
	10	9.707 6419	356	9.773 0807	480	0.226 9193	9.934 5613	125	50	
	20	9.707 6775	354	9.773 1287	479	0.226 8713	9.934 5488	125	40	
	30	9.707 7129	355	9.773 1766	480	0.226 8234	9.934 5363	125	30	
	40	9.707 7484	355	9.773 2246	480	0.226 7754	9.934 5238	125	20	
	50	9.707 7839	355	9.773 2726	480	0.226 7274	9.934 5113	125	10	
41	0	9.707 8194	355	9.773 3206	480	0.226 6794	9.934 4988	125	0	19
	10	9.707 8549	355	9.773 3686	479	0.226 6314	9.934 4863	125	50	
	20	9.707 8904	355	9.773 4165	480	0.226 5835	9.934 4738	125	40	
	30	9.707 9259	354	9.773 4645	480	0.226 5355	9.934 4613	125	30	
	40	9.707 9613	355	9.773 5125	479	0.226 4875	9.934 4488	125	20	
	50	9.707 9968	355	9.773 5604	480	0.226 4396	9.934 4363	125	10	
42	0	9.708 0323	354	9.773 6084	480	0.226 3916	9.934 4238	125	0	18
	10	9.708 0677	355	9.773 6564	479	0.226 3436	9.934 4113	125	50	
	20	9.708 1032	354	9.773 7043	480	0.226 2957	9.934 3988	125	40	
	30	9.708 1386	355	9.773 7523	479	0.226 2477	9.934 3863	125	30	
	40	9.708 1741	354	9.773 8002	480	0.226 1998	9.934 3738	125	20	
	50	9.708 2095	355	9.773 8482	479	0.226 1518	9.934 3613	125	10	
43	0	9.708 2450	354	9.773 8961	480	0.226 1039	9.934 3488	125	0	17
	10	9.708 2804	354	9.773 9441	479	0.226 0559	9.934 3363	125	50	
	20	9.708 3158	354	9.773 9920	480	0.226 0080	9.934 3238	125	40	
	30	9.708 3512	355	9.774 0400	479	0.225 9600	9.934 3113	125	30	
	40	9.708 3867	354	9.774 0879	479	0.225 9121	9.934 2988	126	20	
	50	9.708 4221	354	9.774 1358	480	0.225 8642	9.934 2862	125	10	
44	0	9.708 4575	354	9.774 1838	479	0.225 8162	9.934 2737	125	0	16
	10	9.708 4929	354	9.774 2317	479	0.225 7683	9.934 2612	125	50	
	20	9.708 5283	354	9.774 2796	480	0.225 7204	9.934 2487	125	40	
	30	9.708 5637	354	9.774 3276	479	0.225 6724	9.934 2362	126	30	
	40	9.708 5991	354	9.774 3755	479	0.225 6245	9.934 2236	125	20	
	50	9.708 6345	354	9.774 4234	479	0.225 5766	9.934 2111	125	10	
45	0	9.708 6699	354	9.774 4713	479	0.225 5287	9.934 1986	125	0	15
	10	9.708 7053	354	9.774 5192	480	0.225 4808	9.934 1861	126	50	
	20	9.708 7407	354	9.774 5672	479	0.225 4328	9.934 1735	125	40	
	30	9.708 7761	354	9.774 6151	479	0.225 3849	9.934 1610	125	30	
	40	9.708 8115	353	9.774 6630	479	0.225 3370	9.934 1485	126	20	
	50	9.708 8468	354	9.774 7109	479	0.225 2891	9.934 1359	125	10	
46	0	9.708 8822	354	9.774 7588	479	0.225 2412	9.934 1234	125	0	14
	10	9.708 9176	353	9.774 8067	479	0.225 1933	9.934 1109	126	50	
	20	9.708 9529	354	9.774 8546	479	0.225 1454	9.934 0983	125	40	
	30	9.708 9883	353	9.774 9025	479	0.225 0975	9.934 0858	125	30	
	40	9.709 0236	354	9.774 9504	479	0.225 0496	9.934 0733	126	20	
	50	9.709 0590	353	9.774 9983	479	0.225 0017	9.934 0607	125	10	
47	0	9.709 0943	354	9.775 0462	478	0.224 9538	9.934 0482	126	0	13
	10	9.709 1297	353	9.775 0940	479	0.224 9060	9.934 0356	125	50	
	20	9.709 1650	353	9.775 1419	479	0.224 8581	9.934 0231	126	40	
	30	9.709 2003	354	9.775 1898	479	0.224 8102	9.934 0105	125	30	
	40	9.709 2357	353	9.775 2377	479	0.224 7623	9.933 9980	126	20	
	50	9.709 2710	353	9.775 2856	478	0.224 7144	9.933 9854	125	10	
48	0	9.709 3063	353	9.775 3334	479	0.224 6666	9.933 9729	126	0	12
	10	9.709 3416	354	9.775 3813	479	0.224 6187	9.933 9603	125	50	
	20	9.709 3770	353	9.775 4292	478	0.224 5708	9.933 9478	126	40	
	30	9.709 4123	353	9.775 4770	479	0.224 5230	9.933 9352	125	30	
	40	9.709 4476	353	9.775 5249	479	0.224 4751	9.933 9227	126	20	
	50	9.709 4829	353	9.775 5728	478	0.224 4272	9.933 9101	125	10	
49	0	9.709 5182	353	9.775 6206	479	0.224 3794	9.933 8976	126	0	11
	10	9.709 5535	353	9.775 6685	478	0.224 3315	9.933 8850	126	50	
	20	9.709 5888	352	9.775 7163	479	0.224 2837	9.933 8724	125	40	
	30	9.709 6240	353	9.775 7642	478	0.224 2358	9.933 8599	126	30	
	40	9.709 6593	353	9.775 8120	479	0.224 1880	9.933 8473	126	20	
	50	9.709 6946	353	9.775 8599	478	0.224 1401	9.933 8347	125	10	
50	0	9.709 7299		9.775 9077		0.224 0923	9.933 8222		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

59°

	480
1	48.0
2	96.0
3	144.0
4	192.0
5	240.0
6	288.0
7	336.0
8	384.0
9	432.0

	479
1	47.9
2	95.8
3	143.7
4	191.6
5	239.5
6	287.4
7	335.3
8	383.2
9	431.1

	355
1	35.5
2	71.0
3	106.5
4	142.0
5	177.5
6	213.0
7	248.5
8	284.0
9	319.5

	354
1	35.4
2	70.8
3	106.2
4	141.6
5	177.0
6	212.4
7	247.8
8	283.2
9	318.6

	125
1	12.5
2	25.0
3	37.5
4	50.0
5	62.5
6	75.0
7	87.5
8	100.0
9	112.5

	126
1	12.6
2	25.2
3	37.8
4	50.4
5	63.0
6	75.6
7	88.2
8	100.8
9	113.4

30°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.709 7299	353	9.775 9077	479	0.224 0923	9.933 8222	126	0	10
	10	9.709 7652	352	9.775 9556	478	0.224 0444	9.933 8096	126	50	
	20	9.709 8004	353	9.776 0034	478	0.223 9966	9.933 7970	125	40	
	30	9.709 8357	352	9.776 0512	479	0.223 9488	9.933 7845	126	30	
	40	9.709 8709	353	9.776 0991	478	0.223 9009	9.933 7719	126	20	
	50	9.709 9062	353	9.776 1469	478	0.223 8531	9.933 7593	126	10	
51	0	9.709 9415	352	9.776 1947	478	0.223 8053	9.933 7467	125	0	9
	10	9.709 9767	352	9.776 2425	479	0.223 7575	9.933 7342	126	50	
	20	9.710 0119	353	9.776 2904	478	0.223 7096	9.933 7216	126	40	
	30	9.710 0472	352	9.776 3382	478	0.223 6618	9.933 7090	126	30	
	40	9.710 0824	353	9.776 3860	478	0.223 6140	9.933 6964	126	20	
	50	9.710 1177	352	9.776 4338	478	0.223 5662	9.933 6838	125	10	
52	0	9.710 1529	352	9.776 4816	478	0.223 5184	9.933 6713	126	0	8
	10	9.710 1881	352	9.776 5294	479	0.223 4706	9.933 6587	126	50	
	20	9.710 2233	353	9.776 5773	478	0.223 4227	9.933 6461	126	40	
	30	9.710 2586	352	9.776 6251	478	0.223 3749	9.933 6335	126	30	
	40	9.710 2938	352	9.776 6729	478	0.223 3271	9.933 6209	126	20	
	50	9.710 3290	352	9.776 7207	478	0.223 2793	9.933 6083	126	10	
53	0	9.710 3642	352	9.776 7685	478	0.223 2315	9.933 5957	126	0	7
	10	9.710 3994	352	9.776 8163	477	0.223 1837	9.933 5831	126	50	
	20	9.710 4346	352	9.776 8640	478	0.223 1360	9.933 5705	126	40	
	30	9.710 4698	352	9.776 9118	478	0.223 0882	9.933 5579	126	30	
	40	9.710 5050	352	9.776 9596	478	0.223 0404	9.933 5453	126	20	
	50	9.710 5402	351	9.777 0074	478	0.222 9926	9.933 5327	126	10	
54	0	9.710 5753	352	9.777 0552	478	0.222 9448	9.933 5201	126	0	6
	10	9.710 6105	352	9.777 1030	478	0.222 8970	9.933 5075	126	50	
	20	9.710 6457	352	9.777 1508	477	0.222 8492	9.933 4949	126	40	
	30	9.710 6809	351	9.777 1985	478	0.222 8015	9.933 4823	126	30	
	40	9.710 7160	352	9.777 2463	478	0.222 7537	9.933 4697	126	20	
	50	9.710 7512	351	9.777 2941	477	0.222 7059	9.933 4571	126	10	
55	0	9.710 7863	352	9.777 3418	478	0.222 6582	9.933 4445	126	0	5
	10	9.710 8215	352	9.777 3896	478	0.222 6104	9.933 4319	126	50	
	20	9.710 8567	351	9.777 4374	477	0.222 5626	9.933 4193	126	40	
	30	9.710 8918	351	9.777 4851	478	0.222 5149	9.933 4067	126	30	
	40	9.710 9269	352	9.777 5329	477	0.222 4671	9.933 3941	127	20	
	50	9.710 9621	351	9.777 5806	478	0.222 4194	9.933 3814	126	10	
56	0	9.710 9972	352	9.777 6284	478	0.222 3716	9.933 3688	126	0	4
	10	9.711 0324	351	9.777 6762	477	0.222 3238	9.933 3562	126	50	
	20	9.711 0675	351	9.777 7239	477	0.222 2761	9.933 3436	126	40	
	30	9.711 1026	351	9.777 7716	478	0.222 2284	9.933 3310	127	30	
	40	9.711 1377	351	9.777 8194	477	0.222 1806	9.933 3183	126	20	
	50	9.711 1728	352	9.777 8671	478	0.222 1329	9.933 3057	126	10	
57	0	9.711 2080	351	9.777 9149	477	0.222 0851	9.933 2931	126	0	3
	10	9.711 2431	351	9.777 9626	477	0.222 0374	9.933 2805	127	50	
	20	9.711 2782	351	9.778 0103	478	0.221 9897	9.933 2678	126	40	
	30	9.711 3133	351	9.778 0581	477	0.221 9419	9.933 2552	126	30	
	40	9.711 3484	351	9.778 1058	477	0.221 8942	9.933 2426	127	20	
	50	9.711 3835	351	9.778 1535	477	0.221 8465	9.933 2299	126	10	
58	0	9.711 4186	350	9.778 2012	478	0.221 7988	9.933 2173	126	0	2
	10	9.711 4536	351	9.778 2490	477	0.221 7510	9.933 2047	127	50	
	20	9.711 4887	351	9.778 2967	477	0.221 7033	9.933 1920	126	40	
	30	9.711 5238	351	9.778 3444	477	0.221 6556	9.933 1794	126	30	
	40	9.711 5589	350	9.778 3921	477	0.221 6079	9.933 1668	127	20	
	50	9.711 5939	351	9.778 4398	477	0.221 5602	9.933 1541	126	10	
59	0	9.711 6290	351	9.778 4875	477	0.221 5125	9.933 1415	127	0	1
	10	9.711 6641	350	9.778 5352	477	0.221 4648	9.933 1288	126	50	
	20	9.711 6991	351	9.778 5829	478	0.221 4171	9.933 1162	127	40	
	30	9.711 7342	350	9.778 6307	477	0.221 3693	9.933 1035	126	30	
	40	9.711 7692	351	9.778 6784	476	0.221 3216	9.933 0909	127	20	
	50	9.711 8043	350	9.778 7260	477	0.221 2740	9.933 0782	126	10	
60	0	9.711 8393		9.778 7737		0.221 2263	9.933 0656		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

59°

	478
1	47.8
2	95.6
3	143.4
4	191.2
5	239.0
6	286.8
7	334.6
8	382.4
9	430.2

	477
1	47.7
2	95.4
3	143.1
4	190.8
5	238.5
6	286.2
7	333.9
8	381.6
9	429.3

	353
1	35.3
2	70.6
3	105.9
4	141.2
5	176.5
6	211.8
7	247.1
8	282.4
9	317.7

	352
1	35.2
2	70.4
3	105.6
4	140.8
5	176.0
6	211.2
7	246.4
8	281.6
9	316.8

	351
1	35.1
2	70.2
3	105.3
4	140.4
5	175.5
6	210.6
7	245.7
8	280.8
9	315.9

	127
1	12.7
2	25.4
3	38.1
4	50.8
5	63.5
6	76.2
7	88.9
8	101.6
9	114.3

31°

477	
1	47.7
2	95.4
3	143.1
4	190.8
5	238.5
6	286.2
7	333.9
8	381.6
9	429.3

476	
1	47.6
2	95.2
3	142.8
4	190.4
5	238.0
6	285.6
7	333.2
8	380.8
9	428.4

350	
1	35.0
2	70.0
3	105.0
4	140.0
5	175.0
6	210.0
7	245.0
8	280.0
9	315.0

349	
1	34.9
2	69.8
3	104.7
4	139.6
5	174.5
6	209.4
7	244.3
8	279.2
9	314.1

126	
1	12.6
2	25.2
3	37.8
4	50.4
5	63.0
6	75.6
7	88.2
8	100.8
9	113.4

127	
1	12.7
2	25.4
3	38.1
4	50.8
5	63.5
6	76.2
7	88.9
8	101.6
9	114.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.711 8393	351	9.778 7737	477	0.221 2263	9.933 0656	127	0	60
	10	9.711 8744	350	9.778 8214	477	0.221 1786	9.933 0529	126	50	
	20	9.711 9094	350	9.778 8691	477	0.221 1309	9.933 0403	127	40	
	30	9.711 9444	351	9.778 9168	477	0.221 0832	9.933 0276	126	30	
	40	9.711 9795	350	9.778 9645	477	0.221 0355	9.933 0150	127	20	
	50	9.712 0145	350	9.779 0122	477	0.220 9878	9.933 0023	126	10	
1	0	9.712 0495	350	9.779 0599	476	0.220 9401	9.932 9897	127	0	59
	10	9.712 0845	350	9.779 1075	477	0.220 8925	9.932 9770	127	50	
	20	9.712 1195	351	9.779 1552	477	0.220 8448	9.932 9643	126	40	
	30	9.712 1546	350	9.779 2029	476	0.220 7971	9.932 9517	127	30	
	40	9.712 1896	350	9.779 2505	477	0.220 7495	9.932 9390	127	20	
	50	9.712 2246	350	9.779 2982	477	0.220 7018	9.932 9263	126	10	
2	0	9.712 2596	350	9.779 3459	476	0.220 6541	9.932 9137	127	0	58
	10	9.712 2946	349	9.779 3935	477	0.220 6065	9.932 9010	127	50	
	20	9.712 3295	350	9.779 4412	477	0.220 5588	9.932 8883	126	40	
	30	9.712 3645	350	9.779 4889	476	0.220 5111	9.932 8757	127	30	
	40	9.712 3995	350	9.779 5365	477	0.220 4635	9.932 8630	127	20	
	50	9.712 4345	350	9.779 5842	476	0.220 4158	9.932 8503	127	10	
3	0	9.712 4695	349	9.779 6318	477	0.220 3682	9.932 8376	126	0	57
	10	9.712 5044	350	9.779 6795	476	0.220 3205	9.932 8250	127	50	
	20	9.712 5394	350	9.779 7271	477	0.220 2729	9.932 8123	127	40	
	30	9.712 5744	349	9.779 7748	476	0.220 2252	9.932 7996	127	30	
	40	9.712 6093	350	9.779 8224	476	0.220 1776	9.932 7869	127	20	
	50	9.712 6443	349	9.779 8700	477	0.220 1300	9.932 7742	126	10	
4	0	9.712 6792	350	9.779 9177	476	0.220 0823	9.932 7616	127	0	56
	10	9.712 7142	349	9.779 9653	476	0.220 0347	9.932 7489	127	50	
	20	9.712 7491	350	9.780 0129	477	0.219 9871	9.932 7362	127	40	
	30	9.712 7841	349	9.780 0606	476	0.219 9394	9.932 7235	127	30	
	40	9.712 8190	349	9.780 1082	476	0.219 8918	9.932 7108	127	20	
	50	9.712 8539	350	9.780 1558	476	0.219 8442	9.932 6981	127	10	
5	0	9.712 8889	349	9.780 2034	476	0.219 7966	9.932 6854	127	0	55
	10	9.712 9238	349	9.780 2510	477	0.219 7490	9.932 6727	127	50	
	20	9.712 9587	349	9.780 2987	476	0.219 7013	9.932 6600	127	40	
	30	9.712 9936	349	9.780 3463	476	0.219 6537	9.932 6473	127	30	
	40	9.713 0285	349	9.780 3939	476	0.219 6061	9.932 6346	126	20	
	50	9.713 0634	349	9.780 4415	476	0.219 5585	9.932 6220	128	10	
6	0	9.713 0983	350	9.780 4891	476	0.219 5109	9.932 6092	127	0	54
	10	9.713 1333	348	9.780 5367	476	0.219 4633	9.932 5965	127	50	
	20	9.713 1681	349	9.780 5843	476	0.219 4157	9.932 5838	127	40	
	30	9.713 2030	349	9.780 6319	476	0.219 3681	9.932 5711	127	30	
	40	9.713 2379	349	9.780 6795	476	0.219 3205	9.932 5584	127	20	
	50	9.713 2728	349	9.780 7271	476	0.219 2729	9.932 5457	127	10	
7	0	9.713 3077	349	9.780 7747	476	0.219 2253	9.932 5330	127	0	53
	10	9.713 3426	349	9.780 8223	476	0.219 1777	9.932 5203	127	50	
	20	9.713 3775	348	9.780 8699	475	0.219 1301	9.932 5076	127	40	
	30	9.713 4123	349	9.780 9174	476	0.219 0826	9.932 4949	127	30	
	40	9.713 4472	349	9.780 9650	476	0.219 0350	9.932 4822	127	20	
	50	9.713 4821	348	9.781 0126	476	0.218 9874	9.932 4695	128	10	
8	0	9.713 5169	349	9.781 0602	476	0.218 9398	9.932 4567	127	0	52
	10	9.713 5518	348	9.781 1078	475	0.218 8922	9.932 4440	127	50	
	20	9.713 5866	349	9.781 1553	476	0.218 8447	9.932 4313	127	40	
	30	9.713 6215	348	9.781 2029	476	0.218 7971	9.932 4186	127	30	
	40	9.713 6563	349	9.781 2505	475	0.218 7495	9.932 4059	128	20	
	50	9.713 6912	348	9.781 2980	476	0.218 7020	9.932 3931	127	10	
9	0	9.713 7260	348	9.781 3456	476	0.218 6544	9.932 3804	127	0	51
	10	9.713 7608	349	9.781 3932	475	0.218 6068	9.932 3677	128	50	
	20	9.713 7957	348	9.781 4407	476	0.218 5593	9.932 3549	127	40	
	30	9.713 8305	348	9.781 4883	475	0.218 5117	9.932 3422	127	30	
	40	9.713 8653	348	9.781 5358	476	0.218 4642	9.932 3295	127	20	
	50	9.713 9001	348	9.781 5834	475	0.218 4166	9.932 3168	128	10	
10	0	9.713 9349		9.781 6309		0.218 3691	9.932 3040		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

58°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.713 9349	348	9.781 6309	476	0.218 3691	9.932 3040	127	0	50
	10	9.713 9697	349	9.781 6785	475	0.218 3215	9.932 2913	128	50	
	20	9.714 0046	348	9.781 7260	475	0.218 2740	9.932 2785	127	40	
	30	9.714 0394	348	9.781 7735	476	0.218 2265	9.932 2658	127	30	
	40	9.714 0742	347	9.781 8211	475	0.218 1789	9.932 2531	128	20	
	50	9.714 1089	348	9.781 8686	476	0.218 1314	9.932 2403	127	10	
11	0	9.714 1437	348	9.781 9162	475	0.218 0838	9.932 2276	128	0	49
	10	9.714 1785	348	9.781 9637	475	0.218 0363	9.932 2148	127	50	
	20	9.714 2133	348	9.782 0112	475	0.217 9888	9.932 2021	128	40	
	30	9.714 2481	348	9.782 0587	476	0.217 9413	9.932 1893	127	30	
	40	9.714 2829	347	9.782 1063	475	0.217 8937	9.932 1766	127	20	
	50	9.714 3176	348	9.782 1538	475	0.217 8462	9.932 1639	128	10	
12	0	9.714 3524	348	9.782 2013	475	0.217 7987	9.932 1511	128	0	48
	10	9.714 3872	347	9.782 2488	475	0.217 7512	9.932 1383	127	50	
	20	9.714 4219	348	9.782 2963	475	0.217 7037	9.932 1256	128	40	
	30	9.714 4567	347	9.782 3438	476	0.217 6562	9.932 1128	127	30	
	40	9.714 4914	348	9.782 3914	475	0.217 6086	9.932 1001	128	20	
	50	9.714 5262	347	9.782 4389	475	0.217 5611	9.932 0873	127	10	
13	0	9.714 5609	348	9.782 4864	475	0.217 5136	9.932 0746	128	0	47
	10	9.714 5957	347	9.782 5339	475	0.217 4661	9.932 0618	128	50	
	20	9.714 6304	347	9.782 5814	475	0.217 4186	9.932 0490	127	40	
	30	9.714 6651	348	9.782 6289	475	0.217 3711	9.932 0363	128	30	
	40	9.714 6999	347	9.782 6764	475	0.217 3236	9.932 0235	128	20	
	50	9.714 7346	347	9.782 7239	474	0.217 2761	9.932 0107	127	10	
14	0	9.714 7693	347	9.782 7713	475	0.217 2287	9.931 9980	128	0	46
	10	9.714 8040	348	9.782 8188	475	0.217 1812	9.931 9852	128	50	
	20	9.714 8388	347	9.782 8663	475	0.217 1337	9.931 9724	127	40	
	30	9.714 8735	347	9.782 9138	475	0.217 0862	9.931 9597	128	30	
	40	9.714 9082	347	9.782 9613	475	0.217 0387	9.931 9469	128	20	
	50	9.714 9429	347	9.783 0088	474	0.216 9912	9.931 9341	128	10	
15	0	9.714 9776	347	9.783 0562	475	0.216 9438	9.931 9213	127	0	45
	10	9.715 0123	347	9.783 1037	475	0.216 8963	9.931 9086	128	50	
	20	9.715 0470	347	9.783 1512	474	0.216 8488	9.931 8958	128	40	
	30	9.715 0817	346	9.783 1986	475	0.216 8014	9.931 8830	128	30	
	40	9.715 1163	347	9.783 2461	475	0.216 7539	9.931 8702	128	20	
	50	9.715 1510	347	9.783 2936	474	0.216 7064	9.931 8574	127	10	
16	0	9.715 1857	347	9.783 3410	475	0.216 6590	9.931 8447	128	0	44
	10	9.715 2204	346	9.783 3885	475	0.216 6115	9.931 8319	128	50	
	20	9.715 2550	347	9.783 4360	474	0.216 5640	9.931 8191	128	40	
	30	9.715 2897	347	9.783 4834	475	0.216 5166	9.931 8063	128	30	
	40	9.715 3244	346	9.783 5309	474	0.216 4691	9.931 7935	128	20	
	50	9.715 3590	347	9.783 5783	475	0.216 4217	9.931 7807	128	10	
17	0	9.715 3937	346	9.783 6258	474	0.216 3742	9.931 7679	128	0	43
	10	9.715 4283	347	9.783 6732	474	0.216 3268	9.931 7551	128	50	
	20	9.715 4630	346	9.783 7206	475	0.216 2794	9.931 7423	128	40	
	30	9.715 4976	347	9.783 7681	474	0.216 2319	9.931 7295	128	30	
	40	9.715 5323	346	9.783 8155	475	0.216 1845	9.931 7167	128	20	
	50	9.715 5669	346	9.783 8630	474	0.216 1370	9.931 7039	128	10	
18	0	9.715 6015	347	9.783 9104	474	0.216 0896	9.931 6911	128	0	42
	10	9.715 6362	346	9.783 9578	474	0.216 0422	9.931 6783	128	50	
	20	9.715 6708	346	9.784 0052	475	0.215 9948	9.931 6655	128	40	
	30	9.715 7054	346	9.784 0527	474	0.215 9473	9.931 6527	128	30	
	40	9.715 7400	346	9.784 1001	474	0.215 8999	9.931 6399	128	20	
	50	9.715 7746	346	9.784 1475	474	0.215 8525	9.931 6271	128	10	
19	0	9.715 8092	346	9.784 1949	474	0.215 8051	9.931 6143	128	0	41
	10	9.715 8438	346	9.784 2423	475	0.215 7577	9.931 6015	128	50	
	20	9.715 8784	346	9.784 2898	474	0.215 7102	9.931 5887	128	40	
	30	9.715 9130	346	9.784 3372	474	0.215 6628	9.931 5759	128	30	
	40	9.715 9476	346	9.784 3846	474	0.215 6154	9.931 5631	129	20	
	50	9.715 9822	346	9.784 4320	474	0.215 5680	9.931 5502	128	10	
20	0	9.716 0168		9.784 4794		0.215 5206	9.931 5374		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

58°

	475
1	47.5
2	95.0
3	142.5
4	190.0
5	237.5
6	285.0
7	332.5
8	380.0
9	427.5

	474
1	47.4
2	94.8
3	142.2
4	189.6
5	237.0
6	284.4
7	331.8
8	379.2
9	426.6

	348
1	34.8
2	69.6
3	104.4
4	139.2
5	174.0
6	208.8
7	243.6
8	278.4
9	313.2

	347
1	34.7
2	69.4
3	104.1
4	138.8
5	173.5
6	208.2
7	242.9
8	277.6
9	312.3

	346
1	34.6
2	69.2
3	103.8
4	138.4
5	173.0
6	207.6
7	242.2
8	276.8
9	311.4

	128
1	12.8
2	25.6
3	38.4
4	51.2
5	64.0
6	76.8
7	89.6
8	102.4
9	115.2

31°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.716 0168	346	9.784 4794	474	0.215 5206	9.931 5374	128	0	40
	10	9.716 0514	346	9.784 5268	474	0.215 4732	9.931 5246	128	50	
	20	9.716 0860	345	9.784 5742	474	0.215 4258	9.931 5118	128	40	
	30	9.716 1205	346	9.784 6216	474	0.215 3784	9.931 4990	129	30	
	40	9.716 1551	346	9.784 6690	474	0.215 3310	9.931 4861	128	20	
	50	9.716 1897	346	9.784 7164	474	0.215 2836	9.931 4733	128	10	
21	0	9.716 2243	345	9.784 7638	474	0.215 2362	9.931 4605	128	0	39
	10	9.716 2588	346	9.784 8112	473	0.215 1888	9.931 4477	129	50	
	20	9.716 2934	345	9.784 8585	474	0.215 1415	9.931 4348	128	40	
	30	9.716 3279	346	9.784 9059	474	0.215 0941	9.931 4220	128	30	
	40	9.716 3625	345	9.784 9533	474	0.215 0467	9.931 4092	129	20	
	50	9.716 3970	346	9.785 0007	474	0.214 9993	9.931 3963	128	10	
22	0	9.716 4316	345	9.785 0481	473	0.214 9519	9.931 3835	128	0	38
	10	9.716 4661	345	9.785 0954	474	0.214 9046	9.931 3707	129	50	
	20	9.716 5006	346	9.785 1428	474	0.214 8572	9.931 3578	128	40	
	30	9.716 5352	345	9.785 1902	473	0.214 8098	9.931 3450	129	30	
	40	9.716 5697	345	9.785 2375	474	0.214 7625	9.931 3321	128	20	
	50	9.716 6042	345	9.785 2849	474	0.214 7151	9.931 3193	128	10	
23	0	9.716 6387	345	9.785 3323	473	0.214 6677	9.931 3065	129	0	37
	10	9.716 6732	345	9.785 3796	474	0.214 6204	9.931 2936	128	50	
	20	9.716 7077	346	9.785 4270	473	0.214 5730	9.931 2808	129	40	
	30	9.716 7423	345	9.785 4743	474	0.214 5257	9.931 2679	128	30	
	40	9.716 7768	345	9.785 5217	473	0.214 4783	9.931 2551	129	20	
	50	9.716 8113	345	9.785 5690	474	0.214 4310	9.931 2422	128	10	
24	0	9.716 8458	344	9.785 6164	473	0.214 3836	9.931 2294	129	0	36
	10	9.716 8802	345	9.785 6637	474	0.214 3363	9.931 2165	128	50	
	20	9.716 9147	345	9.785 7111	473	0.214 2889	9.931 2037	129	40	
	30	9.716 9492	345	9.785 7584	473	0.214 2416	9.931 1908	128	30	
	40	9.716 9837	345	9.785 8057	474	0.214 1943	9.931 1780	129	20	
	50	9.717 0182	344	9.785 8531	473	0.214 1469	9.931 1651	129	10	
25	0	9.717 0526	345	9.785 9004	473	0.214 0996	9.931 1522	128	0	35
	10	9.717 0871	345	9.785 9477	474	0.214 0523	9.931 1394	129	50	
	20	9.717 1216	344	9.785 9951	473	0.214 0049	9.931 1265	129	40	
	30	9.717 1560	345	9.786 0424	473	0.213 9576	9.931 1136	128	30	
	40	9.717 1905	345	9.786 0897	473	0.213 9103	9.931 1008	129	20	
	50	9.717 2250	344	9.786 1370	474	0.213 8630	9.931 0879	129	10	
26	0	9.717 2594	345	9.786 1844	473	0.213 8156	9.931 0750	128	0	34
	10	9.717 2939	344	9.786 2317	473	0.213 7683	9.931 0622	129	50	
	20	9.717 3283	344	9.786 2790	473	0.213 7210	9.931 0493	129	40	
	30	9.717 3627	345	9.786 3263	473	0.213 6737	9.931 0364	128	30	
	40	9.717 3972	344	9.786 3736	473	0.213 6264	9.931 0236	129	20	
	50	9.717 4316	344	9.786 4209	473	0.213 5791	9.931 0107	129	10	
27	0	9.717 4660	345	9.786 4682	473	0.213 5318	9.930 9978	129	0	33
	10	9.717 5005	344	9.786 5155	473	0.213 4845	9.930 9849	129	50	
	20	9.717 5349	344	9.786 5628	473	0.213 4372	9.930 9720	128	40	
	30	9.717 5693	344	9.786 6101	473	0.213 3899	9.930 9592	129	30	
	40	9.717 6037	344	9.786 6574	473	0.213 3426	9.930 9463	129	20	
	50	9.717 6381	344	9.786 7047	473	0.213 2953	9.930 9334	129	10	
28	0	9.717 6725	344	9.786 7520	473	0.213 2480	9.930 9205	129	0	32
	10	9.717 7069	344	9.786 7993	473	0.213 2007	9.930 9076	129	50	
	20	9.717 7413	344	9.786 8466	473	0.213 1534	9.930 8947	128	40	
	30	9.717 7757	344	9.786 8939	472	0.213 1061	9.930 8819	129	30	
	40	9.717 8101	344	9.786 9411	473	0.213 0589	9.930 8690	129	20	
	50	9.717 8445	344	9.786 9884	473	0.213 0116	9.930 8561	129	10	
29	0	9.717 8789	344	9.787 0357	473	0.212 9643	9.930 8432	129	0	31
	10	9.717 9133	343	9.787 0830	473	0.212 9170	9.930 8303	129	50	
	20	9.717 9476	344	9.787 1303	472	0.212 8697	9.930 8174	129	40	
	30	9.717 9820	344	9.787 1775	473	0.212 8225	9.930 8045	129	30	
	40	9.718 0164	343	9.787 2248	473	0.212 7752	9.930 7916	129	20	
	50	9.718 0507	344	9.787 2721	472	0.212 7279	9.930 7787	129	10	
30	0	9.718 0851		9.787 3193		0.212 6807	9.930 7658		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

58°

	474
1	47.4
2	94.8
3	142.2
4	189.6
5	237.0
6	284.4
7	331.8
8	379.2
9	426.6

	473
1	47.3
2	94.6
3	141.9
4	189.2
5	236.5
6	283.8
7	331.1
8	378.4
9	425.7

	346
1	34.6
2	69.2
3	103.8
4	138.4
5	173.0
6	207.6
7	242.2
8	276.8
9	311.4

	345
1	34.5
2	69.0
3	103.5
4	138.0
5	172.5
6	207.0
7	241.5
8	276.0
9	310.5

	344
1	34.4
2	68.8
3	103.2
4	137.6
5	172.0
6	206.4
7	240.8
8	275.2
9	309.6

	128
1	12.8
2	25.6
3	38.4
4	51.2
5	64.0
6	76.8
7	89.6
8	102.4
9	115.2

31°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.718 0851	344	9.787 3193	473	0.212 6807	9.930 7658	129	0	30
	10	9.718 1195	343	9.787 3666	472	0.212 6334	9.930 7529	129	50	
	20	9.718 1538	344	9.787 4138	473	0.212 5862	9.930 7400	129	40	
	30	9.718 1882	343	9.787 4611	472	0.212 5389	9.930 7271	129	30	
	40	9.718 2225	343	9.787 5083	473	0.212 4917	9.930 7142	129	20	
	50	9.718 2568	344	9.787 5556	472	0.212 4444	9.930 7013	130	10	
31	0	9.718 2912	343	9.787 6028	473	0.212 3972	9.930 6883	129	0	29
	10	9.718 3255	344	9.787 6501	472	0.212 3499	9.930 6754	129	50	
	20	9.718 3599	343	9.787 6973	473	0.212 3027	9.930 6625	129	40	
	30	9.718 3942	343	9.787 7446	472	0.212 2554	9.930 6496	129	30	
	40	9.718 4285	343	9.787 7918	473	0.212 2082	9.930 6367	129	20	
	50	9.718 4628	343	9.787 8391	472	0.212 1609	9.930 6238	129	10	
32	0	9.718 4971	344	9.787 8863	472	0.212 1137	9.930 6109	130	0	28
	10	9.718 5315	343	9.787 9335	472	0.212 0665	9.930 5979	129	50	
	20	9.718 5658	343	9.787 9807	473	0.212 0193	9.930 5850	129	40	
	30	9.718 6001	343	9.788 0280	472	0.211 9720	9.930 5721	129	30	
	40	9.718 6344	343	9.788 0752	472	0.211 9248	9.930 5592	130	20	
	50	9.718 6687	343	9.788 1224	472	0.211 8776	9.930 5462	129	10	
33	0	9.718 7030	342	9.788 1696	473	0.211 8304	9.930 5333	129	0	27
	10	9.718 7372	343	9.788 2169	472	0.211 7831	9.930 5204	129	50	
	20	9.718 7715	343	9.788 2641	472	0.211 7359	9.930 5075	130	40	
	30	9.718 8058	343	9.788 3113	472	0.211 6887	9.930 4945	129	30	
	40	9.718 8401	343	9.788 3585	472	0.211 6415	9.930 4816	129	20	
	50	9.718 8744	342	9.788 4057	472	0.211 5943	9.930 4687	130	10	
34	0	9.718 9086	343	9.788 4529	472	0.211 5471	9.930 4557	129	0	26
	10	9.718 9429	343	9.788 5001	472	0.211 4999	9.930 4428	130	50	
	20	9.718 9772	342	9.788 5473	472	0.211 4527	9.930 4298	129	40	
	30	9.719 0114	343	9.788 5945	472	0.211 4055	9.930 4169	129	30	
	40	9.719 0457	342	9.788 6417	472	0.211 3583	9.930 4040	130	20	
	50	9.719 0799	343	9.788 6889	472	0.211 3111	9.930 3910	129	10	
35	0	9.719 1142	342	9.788 7361	472	0.211 2639	9.930 3781	130	0	25
	10	9.719 1484	343	9.788 7833	472	0.211 2167	9.930 3651	129	50	
	20	9.719 1827	342	9.788 8305	472	0.211 1695	9.930 3522	130	40	
	30	9.719 2169	342	9.788 8777	472	0.211 1223	9.930 3392	129	30	
	40	9.719 2511	343	9.788 9249	471	0.211 0751	9.930 3263	130	20	
	50	9.719 2854	342	9.788 9720	472	0.211 0280	9.930 3133	129	10	
36	0	9.719 3196	342	9.789 0192	472	0.210 9808	9.930 3004	130	0	24
	10	9.719 3538	342	9.789 0664	472	0.210 9336	9.930 2874	129	50	
	20	9.719 3880	343	9.789 1136	471	0.210 8864	9.930 2745	130	40	
	30	9.719 4223	342	9.789 1607	472	0.210 8393	9.930 2615	129	30	
	40	9.719 4565	342	9.789 2079	472	0.210 7921	9.930 2486	130	20	
	50	9.719 4907	342	9.789 2551	472	0.210 7449	9.930 2356	130	10	
37	0	9.719 5249	342	9.789 3023	471	0.210 6977	9.930 2226	129	0	23
	10	9.719 5591	342	9.789 3494	472	0.210 6506	9.930 2097	130	50	
	20	9.719 5933	342	9.789 3966	471	0.210 6034	9.930 1967	130	40	
	30	9.719 6275	342	9.789 4437	472	0.210 5563	9.930 1837	129	30	
	40	9.719 6617	342	9.789 4909	471	0.210 5091	9.930 1708	130	20	
	50	9.719 6959	341	9.789 5380	472	0.210 4620	9.930 1578	130	10	
38	0	9.719 7300	342	9.789 5852	471	0.210 4148	9.930 1448	129	0	22
	10	9.719 7642	342	9.789 6323	472	0.210 3677	9.930 1319	130	50	
	20	9.719 7984	342	9.789 6795	471	0.210 3205	9.930 1189	130	40	
	30	9.719 8326	341	9.789 7266	472	0.210 2734	9.930 1059	130	30	
	40	9.719 8667	342	9.789 7738	471	0.210 2262	9.930 0929	129	20	
	50	9.719 9009	341	9.789 8209	472	0.210 1791	9.930 0800	130	10	
39	0	9.719 9350	342	9.789 8681	471	0.210 1319	9.930 0670	130	0	21
	10	9.719 9692	342	9.789 9152	471	0,210 0848	9.930 0540	130	50	
	20	9.720 0034	341	9.789 9623	472	0.210 0377	9.930 0410	129	40	
	30	9.720 0375	342	9.790 0095	471	0.209 9905	9.930 0281	130	30	
	40	9.720 0717	341	9.790 0566	471	0.209 9434	9.930 0151	130	20	
	50	9.720 1058	341	9.790 1037	471	0.209 8963	9.930 0021	130	10	
40	0	9.720 1399		9.790 1508		0.209 8492	9.929 9891		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

58°

472	
1	47.2
2	94.4
3	141.6
4	188.8
5	236.0
6	283.2
7	330.4
8	377.6
9	424.8

471	
1	47.1
2	94.2
3	141.3
4	188.4
5	235.5
6	282.6
7	329.7
8	376.8
9	423.9

343	
1	34.3
2	68.6
3	102.9
4	137.2
5	171.5
6	205.8
7	240.1
8	274.4
9	308.7

342	
1	34.2
2	68.4
3	102.6
4	136.8
5	171.0
6	205.2
7	239.4
8	273.6
9	307.8

129	
1	12.9
2	25.8
3	38.7
4	51.6
5	64.5
6	77.4
7	90.3
8	103.2
9	116.1

130	
1	13.0
2	26.0
3	39.0
4	52.0
5	65.0
6	78.0
7	91.0
8	104.0
9	117.0

31°

	471
1	47.1
2	94.2
3	141.3
4	188.4
5	235.5
6	282.6
7	329.7
8	376.8
9	423.9

	470
1	47.0
2	94.0
3	141.0
4	188.0
5	235.0
6	282.0
7	329.0
8	376.0
9	423.0

	341
1	34.1
2	68.2
3	102.3
4	136.4
5	170.5
6	204.6
7	238.7
8	272.8
9	306.9

	340
1	34.0
2	68.0
3	102.0
4	136.0
5	170.0
6	204.0
7	238.0
8	272.0
9	306.0

	339
1	33.9
2	67.8
3	101.7
4	135.6
5	169.5
6	203.4
7	237.3
8	271.2
9	305.1

	130
1	13.0
2	26.0
3	39.0
4	52.0
5	65.0
6	78.0
7	91.0
8	104.0
9	117.0

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.720 1399	342	9.790 1508	472	0.209 8492	9.929 9891	130	0	20
	10	9.720 1741	341	9.790 1980	471	0.209 8020	9.929 9761	130	50	
	20	9.720 2082	341	9.790 2451	471	0.209 7549	9.929 9631	130	40	
	30	9.720 2423	341	9.790 2922	471	0.209 7078	9.929 9501	130	30	
	40	9.720 2764	342	9.790 3393	471	0.209 6607	9.929 9371	130	20	
	50	9.720 3106	341	9.790 3864	471	0.209 6136	9.929 9241	129	10	
41	0	9.720 3447	341	9.790 4335	471	0.209 5665	9.929 9112	130	0	19
	10	9.720 3788	341	9.790 4806	471	0.209 5194	9.929 8982	130	50	
	20	9.720 4129	341	9.790 5277	471	0.209 4723	9.929 8852	130	40	
	30	9.720 4470	341	9.790 5748	471	0.209 4252	9.929 8722	130	30	
	40	9.720 4811	341	9.790 6219	471	0.209 3781	9.929 8592	130	20	
	50	9.720 5152	341	9.790 6690	471	0.209 3310	9.929 8462	130	10	
42	0	9.720 5493	341	9.790 7161	471	0.209 2839	9.929 8332	131	0	18
	10	9.720 5834	341	9.790 7632	471	0.209 2368	9.929 8201	130	50	
	20	9.720 6175	340	9.790 8103	471	0.209 1897	9.929 8071	130	40	
	30	9.720 6515	341	9.790 8574	471	0.209 1426	9.929 7941	130	30	
	40	9.720 6856	341	9.790 9045	471	0.209 0955	9.929 7811	130	20	
	50	9.720 7197	341	9.790 9516	471	0.209 0484	9.929 7681	130	10	
43	0	9.720 7538	340	9.790 9987	470	0.209 0013	9.929 7551	130	0	17
	10	9.720 7878	341	9.791 0457	471	0.208 9543	9.929 7421	130	50	
	20	9.720 8219	341	9.791 0928	471	0.208 9072	9.929 7291	130	40	
	30	9.720 8560	340	9.791 1399	471	0.208 8601	9.929 7161	131	30	
	40	9.720 8900	341	9.791 1870	470	0.208 8130	9.929 7030	130	20	
	50	9.720 9241	340	9.791 2340	471	0.208 7660	9.929 6900	130	10	
44	0	9.720 9581	341	9.791 2811	471	0.208 7189	9.929 6770	130	0	16
	10	9.720 9922	340	9.791 3282	470	0.208 6718	9.929 6640	130	50	
	20	9.721 0262	340	9.791 3752	471	0.208 6248	9.929 6510	131	40	
	30	9.721 0602	341	9.791 4223	471	0.208 5777	9.929 6379	130	30	
	40	9.721 0943	340	9.791 4694	470	0.208 5306	9.929 6249	130	20	
	50	9.721 1283	340	9.791 5164	471	0.208 4836	9.929 6119	130	10	
45	0	9.721 1623	341	9.791 5635	470	0.208 4365	9.929 5989	131	0	15
	10	9.721 1964	340	9.791 6105	471	0.208 3895	9.929 5858	130	50	
	20	9.721 2304	340	9.791 6576	470	0.208 3424	9.929 5728	130	40	
	30	9.721 2644	340	9.791 7046	471	0.208 2954	9.929 5598	131	30	
	40	9.721 2984	340	9.791 7517	470	0.208 2483	9.929 5467	130	20	
	50	9.721 3324	340	9.791 7987	471	0.208 2013	9.929 5337	130	10	
46	0	9.721 3664	340	9.791 8458	470	0.208 1542	9.929 5207	131	0	14
	10	9.721 4004	340	9.791 8928	470	0.208 1072	9.929 5076	130	50	
	20	9.721 4344	340	9.791 9398	471	0.208 0602	9.929 4946	131	40	
	30	9.721 4684	340	9.791 9869	470	0.208 0131	9.929 4815	130	30	
	40	9.721 5024	340	9.792 0339	470	0.207 9661	9.929 4685	131	20	
	50	9.721 5364	340	9.792 0809	471	0.207 9191	9.929 4554	130	10	
47	0	9.721 5704	339	9.792 1280	470	0.207 8720	9.929 4424	130	0	13
	10	9.721 6043	340	9.792 1750	470	0.207 8250	9.929 4294	131	50	
	20	9.721 6383	340	9.792 2220	470	0.207 7780	9.929 4163	130	40	
	30	9.721 6723	340	9.792 2690	471	0.207 7310	9.929 4033	131	30	
	40	9.721 7063	339	9.792 3161	470	0.207 6839	9.929 3902	131	20	
	50	9.721 7402	340	9.792 3631	470	0.207 6369	9.929 3771	130	10	
48	0	9.721 7742	339	9.792 4101	470	0.207 5899	9.929 3641	131	0	12
	10	9.721 8081	340	9.792 4571	470	0.207 5429	9.929 3510	130	50	
	20	9.721 8421	339	9.792 5041	470	0.207 4959	9.929 3380	131	40	
	30	9.721 8760	340	9.792 5511	470	0.207 4489	9.929 3249	130	30	
	40	9.721 9100	339	9.792 5981	470	0.207 4019	9.929 3119	131	20	
	50	9.721 9439	340	9.792 6451	470	0.207 3549	9.929 2988	131	10	
49	0	9.721 9779	339	9.792 6921	470	0.207 3079	9.929 2857	130	0	11
	10	9.722 0118	339	9.792 7391	470	0.207 2609	9.929 2727	131	50	
	20	9.722 0457	340	9.792 7861	470	0.207 2139	9.929 2596	131	40	
	30	9.722 0797	339	9.792 8331	470	0.207 1669	9.929 2465	130	30	
	40	9.722 1136	339	9.792 8801	470	0.207 1199	9.929 2335	131	20	
	50	9.722 1475	339	9.792 9271	470	0.207 0729	9.929 2204	131	10	
50	0	9.722 1814		9.792 9741		0.207 0259	9.929 2073		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

58°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.722 1814	339	9.792 9741	470	0.207 0259	9.929 2073	130	0	10
	10	9.722 2153	339	9.793 0211	470	0.206 9789	9.929 1943	131	50	
	20	9.722 2492	340	9.793 0681	469	0.206 9319	9.929 1812	131	40	
	30	9.722 2832	339	9.793 1150	470	0.206 8850	9.929 1681	131	30	
	40	9.722 3171	338	9.793 1620	470	0.206 8380	9.929 1550	130	20	
	50	9.722 3509	339	9.793 2090	470	0.206 7910	9.929 1420	131	10	
51	0	9.722 3848	339	9.793 2560	469	0.206 7440	9.929 1289	131	0	9
	10	9.722 4187	339	9.793 3029	470	0.206 6971	9.929 1158	131	50	
	20	9.722 4526	339	9.793 3499	470	0.206 6501	9.929 1027	131	40	
	30	9.722 4865	339	9.793 3969	469	0.206 6031	9.929 0896	131	30	
	40	9.722 5204	339	9.793 4438	470	0.206 5562	9.929 0765	130	20	
	50	9.722 5543	338	9.793 4908	470	0.206 5092	9.929 0635	131	10	
52	0	9.722 5881	339	9.793 5378	469	0.206 4622	9.929 0504	131	0	8
	10	9.722 6220	339	9.793 5847	470	0.206 4153	9.929 0373	131	50	
	20	9.722 6559	338	9.793 6317	469	0.206 3683	9.929 0242	131	40	
	30	9.722 6897	339	9.793 6786	470	0.206 3214	9.929 0111	131	30	
	40	9.722 7236	338	9.793 7256	469	0.206 2744	9.928 9980	131	20	
	50	9.722 7574	339	9.793 7725	470	0.206 2275	9.928 9849	131	10	
53	0	9.722 7913	338	9.793 8195	469	0.206 1805	9.928 9718	131	0	7
	10	9.722 8251	339	9.793 8664	470	0.206 1336	9.928 9587	131	50	
	20	9.722 8590	338	9.793 9134	469	0.206 0866	9.928 9456	131	40	
	30	9.722 8928	339	9.793 9603	469	0.206 0397	9.928 9325	131	30	
	40	9.722 9267	338	9.794 0072	470	0.205 9928	9.928 9194	131	20	
	50	9.722 9605	338	9.794 0542	469	0.205 9458	9.928 9063	131	10	
54	0	9.722 9943	338	9.794 1011	469	0.205 8989	9.928 8932	131	0	6
	10	9.723 0281	339	9.794 1480	470	0.205 8520	9.928 8801	131	50	
	20	9.723 0620	338	9.794 1950	469	0.205 8050	9.928 8670	131	40	
	30	9.723 0958	338	9.794 2419	469	0.205 7581	9.928 8539	131	30	
	40	9.723 1296	338	9.794 2888	469	0.205 7112	9.928 8408	131	20	
	50	9.723 1634	338	9.794 3357	470	0.205 6643	9.928 8277	132	10	
55	0	9.723 1972	338	9.794 3827	469	0.205 6173	9.928 8145	131	0	5
	10	9.723 2310	338	9.794 4296	469	0.205 5704	9.928 8014	131	50	
	20	9.723 2648	338	9.794 4765	469	0.205 5235	9.928 7883	131	40	
	30	9.723 2986	338	9.794 5234	469	0.205 4766	9.928 7752	131	30	
	40	9.723 3324	338	9.794 5703	469	0.205 4297	9.928 7621	131	20	
	50	9.723 3662	338	9.794 6172	469	0.205 3828	9.928 7490	132	10	
56	0	9.723 4000	338	9.794 6641	469	0.205 3359	9.928 7358	131	0	4
	10	9.723 4338	337	9.794 7110	469	0.205 2890	9.928 7227	131	50	
	20	9.723 4675	338	9.794 7579	469	0.205 2421	9.928 7096	131	40	
	30	9.723 5013	338	9.794 8048	469	0.205 1952	9.928 6965	132	30	
	40	9.723 5351	337	9.794 8517	469	0.205 1483	9.928 6833	131	20	
	50	9.723 5688	338	9.794 8986	469	0.205 1014	9.928 6702	131	10	
57	0	9.723 6026	338	9.794 9455	469	0.205 0545	9.928 6571	132	0	3
	10	9.723 6364	337	9.794 9924	469	0.205 0076	9.928 6439	131	50	
	20	9.723 6701	338	9.795 0393	469	0.204 9607	9.928 6308	131	40	
	30	9.723 7039	337	9.795 0862	469	0.204 9138	9.928 6177	132	30	
	40	9.723 7376	338	9.795 1331	469	0.204 8669	9.928 6045	131	20	
	50	9.723 7714	337	9.795 1800	468	0.204 8200	9.928 5914	131	10	
58	0	9.723 8051	337	9.795 2268	469	0.204 7732	9.928 5783	132	0	2
	10	9.723 8388	338	9.795 2737	469	0.204 7263	9.928 5651	131	50	
	20	9.723 8726	337	9.795 3206	469	0.204 6794	9.928 5520	132	40	
	30	9.723 9063	337	9.795 3675	468	0.204 6325	9.928 5388	131	30	
	40	9.723 9400	338	9.795 4143	469	0.204 5857	9.928 5257	132	20	
	50	9.723 9738	337	9.795 4612	469	0.204 5388	9.928 5125	131	10	
59	0	9.724 0075	337	9.795 5081	468	0.204 4919	9.928 4994	132	0	1
	10	9.724 0412	337	9.795 5549	469	0.204 4451	9.928 4862	131	50	
	20	9.724 0749	337	9.795 6018	469	0.204 3982	9.928 4731	132	40	
	30	9.724 1086	337	9.795 6487	468	0.204 3513	9.928 4599	131	30	
	40	9.724 1423	337	9.795 6955	469	0.204 3045	9.928 4468	132	20	
	50	9.724 1760	337	9.795 7424	468	0.204 2576	9.928 4336	131	10	
60	0	9.724 2097		9.795 7892		0.204 2108	9.928 4205		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	469
1	46.9
2	93.8
3	140.7
4	187.6
5	234.5
6	281.4
7	328.3
8	375.2
9	422.1

	468
1	46.8
2	93.6
3	140.4
4	187.2
5	234.0
6	280.8
7	327.6
8	374.4
9	421.2

	338
1	33.8
2	67.6
3	101.4
4	135.2
5	169.0
6	202.8
7	236.6
8	270.4
9	304.2

	337
1	33.7
2	67.4
3	101.1
4	134.8
5	168.5
6	202.2
7	235.9
8	269.6
9	303.3

	131
1	13.1
2	26.2
3	39.3
4	52.4
5	65.5
6	78.6
7	91.7
8	104.8
9	117.9

	132
1	13.2
2	26.4
3	39.6
4	52.8
5	66.0
6	79.2
7	92.4
8	105.6
9	118.8

32°

469	
1	46.9
2	93.8
3	140.7
4	187.6
5	234.5
6	281.4
7	328.3
8	375.2
9	422.1

468	
1	46.8
2	93.6
3	140.4
4	187.2
5	234.0
6	280.8
7	327.6
8	374.4
9	421.2

337	
1	33.7
2	67.4
3	101.1
4	134.8
5	168.5
6	202.2
7	235.9
8	269.6
9	303.3

336	
1	33.6
2	67.2
3	100.8
4	134.4
5	168.0
6	201.6
7	235.2
8	268.8
9	302.4

131	
1	13.1
2	26.2
3	39.3
4	52.4
5	65.5
6	78.6
7	91.7
8	104.8
9	117.9

132	
1	13.2
2	26.4
3	39.6
4	52.8
5	66.0
6	79.2
7	92.4
8	105.6
9	118.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.724 2097	337	9.795 7892	469	0.204 2108	9.928 4205	132	0	60
	10	9.724 2434	337	9.795 8361	468	0.204 1639	9.928 4073	131	50	
	20	9.724 2771	337	9.795 8829	469	0.204 1171	9.928 3942	132	40	
	30	9.724 3108	337	9.795 9298	468	0.204 0702	9.928 3810	132	30	
	40	9.724 3445	336	9.795 9766	469	0.204 0234	9.928 3678	131	20	
	50	9.724 3781	337	9.796 0235	468	0.203 9765	9.928 3547	132	10	
1	0	9.724 4118	337	9.796 0703	468	0.203 9297	9.928 3415	131	0	59
	10	9.724 4455	337	9.796 1171	469	0.203 8829	9.928 3284	132	50	
	20	9.724 4792	336	9.796 1640	468	0.203 8360	9.928 3152	132	40	
	30	9.724 5128	337	9.796 2108	468	0.203 7892	9.928 3020	132	30	
	40	9.724 5465	336	9.796 2576	469	0.203 7424	9.928 2888	131	20	
	50	9.724 5801	337	9.796 3045	468	0.203 6955	9.928 2757	132	10	
2	0	9.724 6138	336	9.796 3513	468	0.203 6487	9.928 2625	132	0	58
	10	9.724 6474	337	9.796 3981	468	0.203 6019	9.928 2493	132	50	
	20	9.724 6811	336	9.796 4449	469	0.203 5551	9.928 2361	131	40	
	30	9.724 7147	337	9.796 4918	468	0.203 5082	9.928 2230	132	30	
	40	9.724 7484	336	9.796 5386	468	0.203 4614	9.928 2098	132	20	
	50	9.724 7820	336	9.796 5854	468	0.203 4146	9.928 1966	132	10	
3	0	9.724 8156	337	9.796 6322	468	0.203 3678	9.928 1834	132	0	57
	10	9.724 8493	336	9.796 6790	468	0.203 3210	9.928 1702	131	50	
	20	9.724 8829	336	9.796 7258	468	0.203 2742	9.928 1571	132	40	
	30	9.724 9165	336	9.796 7726	468	0.203 2274	9.928 1439	132	30	
	40	9.724 9501	336	9.796 8194	468	0.203 1806	9.928 1307	132	20	
	50	9.724 9837	337	9.796 8662	468	0.203 1338	9.928 1175	132	10	
4	0	9.725 0174	336	9.796 9130	468	0.203 0870	9.928 1043	132	0	56
	10	9.725 0510	336	9.796 9598	468	0.203 0402	9.928 0911	132	50	
	20	9.725 0846	336	9.797 0066	468	0.202 9934	9.928 0779	132	40	
	30	9.725 1182	336	9.797 0534	468	0.202 9466	9.928 0647	132	30	
	40	9.725 1518	335	9.797 1002	468	0.202 8998	9.928 0515	132	20	
	50	9.725 1853	336	9.797 1470	468	0.202 8530	9.928 0383	132	10	
5	0	9.725 2189	336	9.797 1938	468	0.202 8062	9.928 0251	132	0	55
	10	9.725 2525	336	9.797 2406	468	0.202 7594	9.928 0119	132	50	
	20	9.725 2861	336	9.797 2874	467	0.202 7126	9.927 9987	132	40	
	30	9.725 3197	336	9.797 3341	468	0.202 6659	9.927 9855	132	30	
	40	9.725 3533	335	9.797 3809	468	0.202 6191	9.927 9723	132	20	
	50	9.725 3868	336	9.797 4277	468	0.202 5723	9.927 9591	132	10	
6	0	9.725 4204	336	9.797 4745	467	0.202 5255	9.927 9459	132	0	54
	10	9.725 4540	335	9.797 5212	468	0.202 4788	9.927 9327	132	50	
	20	9.725 4875	336	9.797 5680	468	0.202 4320	9.927 9195	132	40	
	30	9.725 5211	335	9.797 6148	467	0.202 3852	9.927 9063	132	30	
	40	9.725 5546	336	9.797 6615	468	0.202 3385	9.927 8931	132	20	
	50	9.725 5882	335	9.797 7083	468	0.202 2917	9.927 8799	133	10	
7	0	9.725 6217	336	9.797 7551	467	0.202 2449	9.927 8666	132	0	53
	10	9.725 6553	335	9.797 8018	468	0.202 1982	9.927 8534	132	50	
	20	9.725 6888	335	9.797 8486	467	0.202 1514	9.927 8402	132	40	
	30	9.725 7223	336	9.797 8953	468	0.202 1047	9.927 8270	132	30	
	40	9.725 7559	335	9.797 9421	467	0.202 0579	9.927 8138	133	20	
	50	9.725 7894	335	9.797 9888	468	0.202 0112	9.927 8005	132	10	
8	0	9.725 8229	335	9.798 0356	467	0.201 9644	9.927 7873	132	0	52
	10	9.725 8564	335	9.798 0823	468	0.201 9177	9.927 7741	132	50	
	20	9.725 8899	336	9.798 1291	467	0.201 8709	9.927 7609	133	40	
	30	9.725 9235	335	9.798 1758	468	0.201 8242	9.927 7476	132	30	
	40	9.725 9570	335	9.798 2226	467	0.201 7774	9.927 7344	132	20	
	50	9.725 9905	335	9.798 2693	467	0.201 7307	9.927 7212	133	10	
9	0	9.726 0240	335	9.798 3160	468	0.201 6840	9.927 7079	132	0	51
	10	9.726 0575	335	9.798 3628	467	0.201 6372	9.927 6947	132	50	
	20	9.726 0910	335	9.798 4095	467	0.201 5905	9.927 6815	133	40	
	30	9.726 1245	334	9.798 4562	467	0.201 5438	9.927 6682	132	30	
	40	9.726 1579	335	9.798 5029	468	0.201 4971	9.927 6550	132	20	
	50	9.726 1914	335	9.798 5497	467	0.201 4503	9.927 6418	133	10	
10	0	9.726 2249		9.798 5964		0.201 4036	9.927 6285		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

57°

32°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.726 2249	335	9.798 5964	467	0.201 4036	9.927 6285	132	0	50
	10	9.726 2584	335	9.798 6431	467	0.201 3569	9.927 6153	133	50	
	20	9.726 2919	334	9.798 6898	467	0.201 3102	9.927 6020	132	40	
	30	9.726 3253	335	9.798 7365	467	0.201 2635	9.927 5888	133	30	
	40	9.726 3588	335	9.798 7832	468	0.201 2168	9.927 5755	132	20	
	50	9.726 3923	334	9.798 8300	467	0.201 1700	9.927 5623	133	10	
11	0	9.726 4257	335	9.798 8767	467	0.201 1233	9.927 5490	132	0	49
	10	9.726 4592	334	9.798 9234	467	0.201 0766	9.927 5358	133	50	
	20	9.726 4926	335	9.798 9701	467	0.201 0299	9.927 5225	132	40	
	30	9.726 5261	334	9.799 0168	467	0.200 9832	9.927 5093	133	30	
	40	9.726 5595	334	9.799 0635	467	0.200 9365	9.927 4960	132	20	
	50	9.726 5929	335	9.799 1102	467	0.200 8898	9.927 4828	133	10	
12	0	9.726 6264	334	9.799 1569	467	0.200 8431	9.927 4695	132	0	48
	10	9.726 6598	334	9.799 2036	467	0.200 7964	9.927 4563	133	50	
	20	9.726 6932	335	9.799 2503	466	0.200 7497	9.927 4430	133	40	
	30	9.726 7267	334	9.799 2969	467	0.200 7031	9.927 4297	132	30	
	40	9.726 7601	334	9.799 3436	467	0.200 6564	9.927 4165	133	20	
	50	9.726 7935	334	9.799 3903	467	0.200 6097	9.927 4032	133	10	
13	0	9.726 8269	334	9.799 4370	467	0.200 5630	9.927 3899	132	0	47
	10	9.726 8603	335	9.799 4837	467	0.200 5163	9.927 3767	133	50	
	20	9.726 8938	334	9.799 5304	466	0.200 4696	9.927 3634	133	40	
	30	9.726 9272	334	9.799 5770	467	0.200 4230	9.927 3501	132	30	
	40	9.726 9606	334	9.799 6237	467	0.200 3763	9.927 3369	133	20	
	50	9.726 9940	333	9.799 6704	466	0.200 3296	9.927 3236	133	10	
14	0	9.727 0273	334	9.799 7170	467	0.200 2830	9.927 3103	133	0	46
	10	9.727 0607	334	9.799 7637	467	0.200 2363	9.927 2970	133	50	
	20	9.727 0941	334	9.799 8104	466	0.200 1896	9.927 2837	132	40	
	30	9.727 1275	334	9.799 8570	467	0.200 1430	9.927 2705	133	30	
	40	9.727 1609	334	9.799 9037	467	0.200 0963	9.927 2572	133	20	
	50	9.727 1943	333	9.799 9504	466	0.200 0496	9.927 2439	133	10	
15	0	9.727 2276	334	9.799 9970	467	0.200 0030	9.927 2306	133	0	45
	10	9.727 2610	334	9.800 0437	466	0.199 9563	9.927 2173	133	50	
	20	9.727 2944	333	9.800 0903	467	0.199 9097	9.927 2040	132	40	
	30	9.727 3277	334	9.800 1370	466	0.199 8630	9.927 1908	133	30	
	40	9.727 3611	333	9.800 1836	467	0.199 8164	9.927 1775	133	20	
	50	9.727 3944	334	9.800 2303	466	0.199 7697	9.927 1642	133	10	
16	0	9.727 4278	333	9.800 2769	467	0.199 7231	9.927 1509	133	0	44
	10	9.727 4611	334	9.800 3236	466	0.199 6764	9.927 1376	133	50	
	20	9.727 4945	333	9.800 3702	466	0.199 6298	9.927 1243	133	40	
	30	9.727 5278	334	9.800 4168	467	0.199 5832	9.927 1110	133	30	
	40	9.727 5612	333	9.800 4635	466	0.199 5365	9.927 0977	133	20	
	50	9.727 5945	333	9.800 5101	466	0.199 4899	9.927 0844	133	10	
17	0	9.727 6278	333	9.800 5567	467	0.199 4433	9.927 0711	133	0	43
	10	9.727 6611	334	9.800 6034	466	0.199 3966	9.927 0578	133	50	
	20	9.727 6945	333	9.800 6500	466	0.199 3500	9.927 0445	133	40	
	30	9.727 7278	333	9.800 6966	466	0.199 3034	9.927 0312	133	30	
	40	9.727 7611	333	9.800 7432	466	0.199 2568	9.927 0179	133	20	
	50	9.727 7944	333	9.800 7898	467	0.199 2102	9.927 0046	133	10	
18	0	9.727 8277	333	9.800 8365	466	0.199 1635	9.926 9913	134	0	42
	10	9.727 8610	333	9.800 8831	466	0.199 1169	9.926 9779	133	50	
	20	9.727 8943	333	9.800 9297	466	0.199 0703	9.926 9646	133	40	
	30	9.727 9276	333	9.800 9763	466	0.199 0237	9.926 9513	133	30	
	40	9.727 9609	333	9.801 0229	466	0.198 9771	9.926 9380	133	20	
	50	9.727 9942	333	9.801 0695	466	0.198 9305	9.926 9247	133	10	
19	0	9.728 0275	333	9.801 1161	466	0.198 8839	9.926 9114	133	0	41
	10	9.728 0608	333	9.801 1627	466	0.198 8373	9.926 8981	134	50	
	20	9.728 0941	332	9.801 2093	466	0.198 7907	9.926 8847	133	40	
	30	9.728 1273	333	9.801 2559	466	0.198 7441	9.926 8714	133	30	
	40	9.728 1606	333	9.801 3025	466	0.198 6975	9.926 8581	133	20	
	50	9.728 1939	332	9.801 3491	466	0.198 6509	9.926 8448	134	10	
20	0	9.728 2271		9.801 3957		0.198 6043	9.926 8314		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

467	
1	46.7
2	93.4
3	140.1
4	186.8
5	233.5
6	280.2
7	326.9
8	373.6
9	420.3

466	
1	46.6
2	93.2
3	139.8
4	186.4
5	233.0
6	279.6
7	326.2
8	372.8
9	419.4

335	
1	33.5
2	67.0
3	100.5
4	134.0
5	167.5
6	201.0
7	234.5
8	268.0
9	301.5

334	
1	33.4
2	66.8
3	100.2
4	133.6
5	167.0
6	200.4
7	233.8
8	267.2
9	300.6

333	
1	33.3
2	66.6
3	99.9
4	133.2
5	166.5
6	199.8
7	233.1
8	266.4
9	299.7

133	
1	13.3
2	26.6
3	39.9
4	53.2
5	66.5
6	79.8
7	93.1
8	106.4
9	119.7

57°

32°

466	
1	46.6
2	93.2
3	139.8
4	186.4
5	233.0
6	279.6
7	326.2
8	372.8
9	419.4

465	
1	46.5
2	93.0
3	139.5
4	186.0
5	232.5
6	279.0
7	325.5
8	372.0
9	418.5

333	
1	33.3
2	66.6
3	99.9
4	133.2
5	166.5
6	199.8
7	233.1
8	266.4
9	299.7

332	
1	33.2
2	66.4
3	99.6
4	132.8
5	166.0
6	199.2
7	232.4
8	265.6
9	298.8

331	
1	33.1
2	66.2
3	99.3
4	132.4
5	165.5
6	198.6
7	231.7
8	264.8
9	297.9

133	
1	13.3
2	26.6
3	39.9
4	53.2
5	66.5
6	79.8
7	93.1
8	106.4
9	119.7

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.728 2271	333	9.801 3957	466	0.198 6043	9.926 8314	133	0	40
	10	9.728 2604	333	9.801 4423	466	0.198 5577	9.926 8181	133	50	
	20	9.728 2937	332	9.801 4889	466	0.198 5111	9.926 8048	134	40	
	30	9.728 3269	333	9.801 5355	466	0.198 4645	9.926 7914	133	30	
	40	9.728 3602	332	9.801 5821	465	0.198 4179	9.926 7781	133	20	
	50	9.728 3934	333	9.801 6286	466	0.198 3714	9.926 7648	134	10	
21	0	9.728 4267	332	9.801 6752	466	0.198 3248	9.926 7514	133	0	39
	10	9.728 4599	332	9.801 7218	466	0.198 2782	9.926 7381	133	50	
	20	9.728 4931	333	9.801 7684	465	0.198 2316	9.926 7248	134	40	
	30	9.728 5264	332	9.801 8149	466	0.198 1851	9.926 7114	133	30	
	40	9.728 5596	332	9.801 8615	466	0.198 1385	9.926 6981	134	20	
	50	9.728 5928	332	9.801 9081	465	0.198 0919	9.926 6847	133	10	
22	0	9.728 6260	333	9.801 9546	466	0.198 0454	9.926 6714	134	0	38
	10	9.728 6593	332	9.802 0012	466	0.197 9988	9.926 6580	133	50	
	20	9.728 6925	332	9.802 0478	465	0.197 9522	9.926 6447	133	40	
	30	9.728 7257	332	9.802 0943	466	0.197 9057	9.926 6314	134	30	
	40	9.728 7589	332	9.802 1409	465	0.197 8591	9.926 6180	133	20	
	50	9.728 7921	332	9.802 1874	466	0.197 8126	9.926 6047	134	10	
23	0	9.728 8253	332	9.802 2340	465	0.197 7660	9.926 5913	134	0	37
	10	9.728 8585	332	9.802 2805	466	0.197 7195	9.926 5779	133	50	
	20	9.728 8917	332	9.802 3271	465	0.197 6729	9.926 5646	134	40	
	30	9.728 9249	332	9.802 3736	466	0.197 6264	9.926 5512	133	30	
	40	9.728 9581	331	9.802 4202	465	0.197 5798	9.926 5379	134	20	
	50	9.728 9912	332	9.802 4667	466	0.197 5333	9.926 5245	133	10	
24	0	9.729 0244	332	9.802 5133	465	0.197 4867	9.926 5112	134	0	36
	10	9.729 0576	332	9.802 5598	465	0.197 4402	9.926 4978	134	50	
	20	9.729 0908	331	9.802 6063	466	0.197 3937	9.926 4844	133	40	
	30	9.729 1239	332	9.802 6529	465	0.197 3471	9.926 4711	134	30	
	40	9.729 1571	332	9.802 6994	465	0.197 3006	9.926 4577	134	20	
	50	9.729 1903	331	9.802 7459	466	0.197 2541	9.926 4443	133	10	
25	0	9.729 2234	332	9.802 7925	465	0.197 2075	9.926 4310	134	0	35
	10	9.729 2566	331	9.802 8390	465	0.197 1610	9.926 4176	134	50	
	20	9.729 2897	332	9.802 8855	465	0.197 1145	9.926 4042	134	40	
	30	9.729 3229	331	9.802 9320	466	0.197 0680	9.926 3908	133	30	
	40	9.729 3560	332	9.802 9786	465	0.197 0214	9.926 3775	134	20	
	50	9.729 3892	331	9.803 0251	465	0.196 9749	9.926 3641	134	10	
26	0	9.729 4223	331	9.803 0716	465	0.196 9284	9.926 3507	134	0	34
	10	9.729 4554	332	9.803 1181	465	0.196 8819	9.926 3373	134	50	
	20	9.729 4886	331	9.803 1646	465	0.196 8354	9.926 3239	133	40	
	30	9.729 5217	331	9.803 2111	465	0.196 7889	9.926 3106	134	30	
	40	9.729 5548	331	9.803 2576	465	0.196 7424	9.926 2972	134	20	
	50	9.729 5879	332	9.803 3041	465	0.196 6959	9.926 2838	134	10	
27	0	9.729 6211	331	9.803 3506	465	0.196 6494	9.926 2704	134	0	33
	10	9.729 6542	331	9.803 3971	465	0.196 6029	9.926 2570	134	50	
	20	9.729 6873	331	9.803 4436	465	0.196 5564	9.926 2436	134	40	
	30	9.729 7204	331	9.803 4901	465	0.196 5099	9.926 2302	134	30	
	40	9.729 7535	331	9.803 5366	465	0.196 4634	9.926 2168	134	20	
	50	9.729 7866	331	9.803 5831	465	0.196 4169	9.926 2034	133	10	
28	0	9.729 8197	331	9.803 6296	465	0.196 3704	9.926 1901	134	0	32
	10	9.729 8528	330	9.803 6761	465	0.196 3239	9.926 1767	134	50	
	20	9.729 8858	331	9.803 7226	465	0.196 2774	9.926 1633	134	40	
	30	9.729 9189	331	9.803 7691	465	0.196 2309	9.926 1499	134	30	
	40	9.729 9520	331	9.803 8156	464	0.196 1844	9.926 1365	134	20	
	50	9.729 9851	331	9.803 8620	465	0.196 1380	9.926 1231	135	10	
29	0	9.730 0182	330	9.803 9085	465	0.196 0915	9.926 1096	134	0	31
	10	9.730 0512	331	9.803 9550	465	0.196 0450	9.926 0962	134	50	
	20	9.730 0843	331	9.804 0015	464	0.195 9985	9.926 0828	134	40	
	30	9.730 1174	330	9.804 0479	465	0.195 9521	9.926 0694	134	30	
	40	9.730 1504	331	9.804 0944	465	0.195 9056	9.926 0560	134	20	
	50	9.730 1835	330	9.804 1409	464	0.195 8591	9.926 0426	134	10	
30	0	9.730 2165		9.804 1873		0.195 8127	9.926 0292		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

57°

32°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.730 2165	331	9.804 1873	465	0.195 8127	9.926 0292	134	0	30
	10	9.730 2496	330	9.804 2338	465	0.195 7662	9.926 0158	134	50	
	20	9.730 2826	331	9.804 2803	464	0.195 7197	9.926 0024	135	40	
	30	9.730 3157	330	9.804 3267	465	0.195 6733	9.925 9889	134	30	
	40	9.730 3487	330	9.804 3732	464	0.195 6268	9.925 9755	134	20	
	50	9.730 3817	331	9.804 4196	465	0.195 5804	9.925 9621	134	10	
31	0	9.730 4148	330	9.804 4661	464	0.195 5339	9.925 9487	134	0	29
	10	9.730 4478	330	9.804 5125	465	0.195 4875	9.925 9353	135	50	
	20	9.730 4808	330	9.804 5590	464	0.195 4410	9.925 9218	134	40	
	30	9.730 5138	330	9.804 6054	465	0.195 3946	9.925 9084	134	30	
	40	9.730 5468	331	9.804 6519	464	0.195 3481	9.925 8950	134	20	
	50	9.730 5799	330	9.804 6983	464	0.195 3017	9.925 8816	135	10	
32	0	9.730 6129	330	9.804 7447	465	0.195 2553	9.925 8681	134	0	28
	10	9.730 6459	330	9.804 7912	464	0.195 2088	9.925 8547	134	50	
	20	9.730 6789	330	9.804 8376	465	0.195 1624	9.925 8413	135	40	
	30	9.730 7119	330	9.804 8841	464	0.195 1159	9.925 8278	134	30	
	40	9.730 7449	330	9.804 9305	464	0.195 0695	9.925 8144	134	20	
	50	9.730 7779	330	9.804 9769	464	0.195 0231	9.925 8010	135	10	
33	0	9.730 8109	329	9.805 0233	465	0.194 9767	9.925 7875	134	0	27
	10	9.730 8438	330	9.805 0698	464	0.194 9302	9.925 7741	135	50	
	20	9.730 8768	330	9.805 1162	464	0.194 8838	9.925 7606	134	40	
	30	9.730 9098	330	9.805 1626	464	0.194 8374	9.925 7472	135	30	
	40	9.730 9428	329	9.805 2090	464	0.194 7910	9.925 7337	134	20	
	50	9.730 9757	330	9.805 2554	465	0.194 7446	9.925 7203	134	10	
34	0	9.731 0087	330	9.805 3019	464	0.194 6981	9.925 7069	135	0	26
	10	9.731 0417	329	9.805 3483	464	0.194 6517	9.925 6934	134	50	
	20	9.731 0746	330	9.805 3947	464	0.194 6053	9.925 6800	135	40	
	30	9.731 1076	329	9.805 4411	464	0.194 5589	9.925 6665	135	30	
	40	9.731 1405	330	9.805 4875	464	0.194 5125	9.925 6530	134	20	
	50	9.731 1735	329	9.805 5339	464	0.194 4661	9.925 6396	135	10	
35	0	9.731 2064	330	9.805 5803	464	0.194 4197	9.925 6261	134	0	25
	10	9.731 2394	329	9.805 6267	464	0.194 3733	9.925 6127	135	50	
	20	9.731 2723	330	9.805 6731	464	0.194 3269	9.925 5992	134	40	
	30	9.731 3053	329	9.805 7195	464	0.194 2805	9.925 5858	135	30	
	40	9.731 3382	329	9.805 7659	464	0.194 2341	9.925 5723	135	20	
	50	9.731 3711	329	9.805 8123	464	0.194 1877	9.925 5588	134	10	
36	0	9.731 4040	330	9.805 8587	464	0.194 1413	9.925 5454	135	0	24
	10	9.731 4370	329	9.805 9051	463	0.194 0949	9.925 5319	135	50	
	20	9.731 4699	329	9.805 9514	464	0.194 0486	9.925 5184	134	40	
	30	9.731 5028	329	9.805 9978	464	0.194 0022	9.925 5050	135	30	
	40	9.731 5357	329	9.806 0442	464	0.193 9558	9.925 4915	135	20	
	50	9.731 5686	329	9.806 0906	464	0.193 9094	9.925 4780	134	10	
37	0	9.731 6015	329	9.806 1370	463	0.193 8630	9.925 4646	135	0	23
	10	9.731 6344	329	9.806 1833	464	0.193 8167	9.925 4511	135	50	
	20	9.731 6673	329	9.806 2297	464	0.193 7703	9.925 4376	135	40	
	30	9.731 7002	329	9.806 2761	463	0.193 7239	9.925 4241	135	30	
	40	9.731 7331	329	9.806 3224	464	0.193 6776	9.925 4106	134	20	
	50	9.731 7660	329	9.806 3688	464	0.193 6312	9.925 3972	135	10	
38	0	9.731 7989	328	9.806 4152	463	0.193 5848	9.925 3837	135	0	22
	10	9.731 8317	329	9.806 4615	464	0.193 5385	9.925 3702	135	50	
	20	9.731 8646	329	9.806 5079	464	0.193 4921	9.925 3567	135	40	
	30	9.731 8975	329	9.806 5543	463	0.193 4457	9.925 3432	135	30	
	40	9.731 9304	328	9.806 6006	464	0.193 3994	9.925 3297	134	20	
	50	9.731 9632	329	9.806 6470	463	0.193 3530	9.925 3163	135	10	
39	0	9.731 9961	328	9.806 6933	464	0.193 3067	9.925 3028	135	0	21
	10	9.732 0289	329	9.806 7397	463	0.193 2603	9.925 2893	135	50	
	20	9.732 0618	328	9.806 7860	464	0.193 2140	9.925 2758	135	40	
	30	9.732 0946	329	9.806 8324	463	0.193 1676	9.925 2623	135	30	
	40	9.732 1275	328	9.806 8787	464	0.193 1213	9.925 2488	135	20	
	50	9.732 1603	329	9.806 9251	463	0.193 0749	9.925 2353	135	10	
40	0	9.732 1932		9.806 9714		0.193 0286	9.925 2218		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

57°

	464
1	46.4
2	92.8
3	139.2
4	185.6
5	232.0
6	278.4
7	324.8
8	371.2
9	417.6

	463
1	46.3
2	92.6
3	138.9
4	185.2
5	231.5
6	277.8
7	324.1
8	370.4
9	416.7

	330
1	33.0
2	66.0
3	99.0
4	132.0
5	165.0
6	198.0
7	231.0
8	264.0
9	297.0

	329
1	32.9
2	65.8
3	98.7
4	131.6
5	164.5
6	197.4
7	230.3
8	263.2
9	296.1

	134
1	13.4
2	26.8
3	40.2
4	53.6
5	67.0
6	80.4
7	93.8
8	107.2
9	120.6

	135
1	13.5
2	27.0
3	40.5
4	54.0
5	67.5
6	81.0
7	94.5
8	108.0
9	121.5

32°

464	
1	46.4
2	92.8
3	139.2
4	185.6
5	232.0
6	278.4
7	324.8
8	371.2
9	417.6

463	
1	46.3
2	92.6
3	138.9
4	185.2
5	231.5
6	277.8
7	324.1
8	370.4
9	416.7

328	
1	32.8
2	65.6
3	98.4
4	131.2
5	164.0
6	196.8
7	229.6
8	262.4
9	295.2

327	
1	32.7
2	65.4
3	98.1
4	130.8
5	163.5
6	196.2
7	228.9
8	261.6
9	294.3

135	
1	13.5
2	27.0
3	40.5
4	54.0
5	67.5
6	81.0
7	94.5
8	108.0
9	121.5

136	
1	13.6
2	27.2
3	40.8
4	54.4
5	68.0
6	81.6
7	95.2
8	108.8
9	122.4

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.732 1932	328	9.806 9714	463	0.193 0286	9.925 2218	135	0	20
	10	9.732 2260	329	9.807 0177	464	0.192 9823	9.925 2083	135	50	
	20	9.732 2589	328	9.807 0641	463	0.192 9359	9.925 1948	135	40	
	30	9.732 2917	328	9.807 1104	463	0.192 8896	9.925 1813	135	30	
	40	9.732 3245	328	9.807 1567	464	0.192 8433	9.925 1678	135	20	
	50	9.732 3573	329	9.807 2031	463	0.192 7969	9.925 1543	135	10	
41	0	9.732 3902	328	9.807 2494	463	0.192 7506	9.925 1408	135	0	19
	10	9.732 4230	328	9.807 2957	463	0.192 7043	9.925 1273	136	50	
	20	9.732 4558	328	9.807 3420	464	0.192 6580	9.925 1137	135	40	
	30	9.732 4886	328	9.807 3884	463	0.192 6116	9.925 1002	135	30	
	40	9.732 5214	328	9.807 4347	463	0.192 5653	9.925 0867	135	20	
	50	9.732 5542	328	9.807 4810	463	0.192 5190	9.925 0732	135	10	
42	0	9.732 5870	328	9.807 5273	463	0.192 4727	9.925 0597	135	0	18
	10	9.732 6198	328	9.807 5736	463	0.192 4264	9.925 0462	136	50	
	20	9.732 6526	328	9.807 6199	463	0.192 3801	9.925 0326	135	40	
	30	9.732 6854	328	9.807 6662	463	0.192 3338	9.925 0191	135	30	
	40	9.732 7182	327	9.807 7125	464	0.192 2875	9.925 0056	135	20	
	50	9.732 7509	328	9.807 7589	463	0.192 2411	9.924 9921	135	10	
43	0	9.732 7837	328	9.807 8052	463	0.192 1948	9.924 9786	136	0	17
	10	9.732 8165	328	9.807 8515	463	0.192 1485	9.924 9650	135	50	
	20	9.732 8493	327	9.807 8978	463	0.192 1022	9.924 9515	135	40	
	30	9.732 8820	328	9.807 9441	462	0.192 0559	9.924 9380	136	30	
	40	9.732 9148	327	9.807 9903	463	0.192 0097	9.924 9244	135	20	
	50	9.732 9475	328	9.808 0366	463	0.191 9634	9.924 9109	135	10	
44	0	9.732 9803	328	9.808 0829	463	0.191 9171	9.924 8974	136	0	16
	10	9.733 0131	327	9.808 1292	463	0.191 8708	9.924 8838	135	50	
	20	9.733 0458	328	9.808 1755	463	0.191 8245	9.924 8703	135	40	
	30	9.733 0786	327	9.808 2218	463	0.191 7782	9.924 8568	136	30	
	40	9.733 1113	327	9.808 2681	463	0.191 7319	9.924 8432	135	20	
	50	9.733 1440	328	9.808 3144	462	0.191 6856	9.924 8297	136	10	
45	0	9.733 1768	327	9.808 3606	463	0.191 6394	9.924 8161	135	0	15
	10	9.733 2095	327	9.808 4069	463	0.191 5931	9.924 8026	135	50	
	20	9.733 2422	328	9.808 4532	463	0.191 5468	9.924 7891	136	40	
	30	9.733 2750	327	9.808 4995	462	0.191 5005	9.924 7755	135	30	
	40	9.733 3077	327	9.808 5457	463	0.191 4543	9.924 7620	136	20	
	50	9.733 3404	327	9.808 5920	463	0.191 4080	9.924 7484	135	10	
46	0	9.733 3731	327	9.808 6383	462	0.191 3617	9.924 7349	136	0	14
	10	9.733 4058	327	9.808 6845	463	0.191 3155	9.924 7213	135	50	
	20	9.733 4385	327	9.808 7308	462	0.191 2692	9.924 7078	136	40	
	30	9.733 4712	327	9.808 7770	463	0.191 2230	9.924 6942	136	30	
	40	9.733 5039	327	9.808 8233	463	0.191 1767	9.924 6806	135	20	
	50	9.733 5366	327	9.808 8696	462	0.191 1304	9.924 6671	136	10	
47	0	9.733 5693	327	9.808 9158	463	0.191 0842	9.924 6535	135	0	13
	10	9.733 6020	327	9.808 9621	462	0.191 0379	9.924 6400	136	50	
	20	9.733 6347	327	9.809 0083	463	0.190 9917	9.924 6264	136	40	
	30	9.733 6674	327	9.809 0546	462	0.190 9454	9.924 6128	135	30	
	40	9.733 7001	326	9.809 1008	462	0.190 8992	9.924 5993	136	20	
	50	9.733 7327	327	9.809 1470	463	0.190 8530	9.924 5857	136	10	
48	0	9.733 7654	327	9.809 1933	462	0.190 8067	9.924 5721	135	0	12
	10	9.733 7981	327	9.809 2395	463	0.190 7605	9.924 5586	136	50	
	20	9.733 8308	326	9.809 2858	462	0.190 7142	9.924 5450	136	40	
	30	9.733 8634	327	9.809 3320	462	0.190 6680	9.924 5314	136	30	
	40	9.733 8961	326	9.809 3782	463	0.190 6218	9.924 5178	135	20	
	50	9.733 9287	327	9.809 4245	462	0.190 5755	9.924 5043	136	10	
49	0	9.733 9614	326	9.809 4707	462	0.190 5293	9.924 4907	136	0	11
	10	9.733 9940	327	9.809 5169	462	0.190 4831	9.924 4771	136	50	
	20	9.734 0267	326	9.809 5631	463	0.190 4369	9.924 4635	135	40	
	30	9.734 0593	327	9.809 6094	462	0.190 3906	9.924 4500	136	30	
	40	9.734 0920	326	9.809 6556	462	0.190 3444	9.924 4364	136	20	
	50	9.734 1246	326	9.809 7018	462	0.190 2982	9.924 4228	136	10	
50	0	9.734 1572		9.809 7480		0.190 2520	9.924 4092		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

57°

32°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.734 1572	327	9.809 7480	462	0.190 2520	9.924 4092	136	0	10
	10	9.734 1899	326	9.809 7942	463	0.190 2058	9.924 3956	136	50	
	20	9.734 2225	326	9.809 8405	462	0.190 1595	9.924 3820	136	40	
	30	9.734 2551	326	9.809 8867	462	0.190 1133	9.924 3684	136	30	
	40	9.734 2877	326	9.809 9329	462	0.190 0671	9.924 3548	136	20	
	50	9.734 3203	326	9.809 9791	462	0.190 0209	9.924 3412	135	10	
51	0	9.734 3529	326	9.810 0253	462	0.189 9747	9.924 3277	136	0	9
	10	9.734 3855	326	9.810 0715	462	0.189 9285	9.924 3141	136	50	
	20	9.734 4181	326	9.810 1177	462	0.189 8823	9.924 3005	136	40	
	30	9.734 4507	326	9.810 1639	462	0.189 8361	9.924 2869	136	30	
	40	9.734 4833	326	9.810 2101	462	0.189 7899	9.924 2733	136	20	
	50	9.734 5159	326	9.810 2563	462	0.189 7437	9.924 2597	136	10	
52	0	9.734 5485	326	9.810 3025	462	0.189 6975	9.924 2461	136	0	8
	10	9.734 5811	326	9.810 3487	462	0.189 6513	9.924 2325	137	50	
	20	9.734 6137	326	9.810 3949	461	0.189 6051	9.924 2188	136	40	
	30	9.734 6463	326	9.810 4410	462	0.189 5590	9.924 2052	136	30	
	40	9.734 6789	325	9.810 4872	462	0.189 5128	9.924 1916	136	20	
	50	9.734 7114	326	9.810 5334	462	0.189 4666	9.924 1780	136	10	
53	0	9.734 7440	326	9.810 5796	462	0.189 4204	9.924 1644	136	0	7
	10	9.734 7766	325	9.810 6258	461	0.189 3742	9.924 1508	136	50	
	20	9.734 8091	326	9.810 6719	462	0.189 3281	9.924 1372	136	40	
	30	9.734 8417	325	9.810 7181	462	0.189 2819	9.924 1236	137	30	
	40	9.734 8742	326	9.810 7643	462	0.189 2357	9.924 1099	136	20	
	50	9.734 9068	325	9.810 8105	461	0.189 1895	9.924 0963	136	10	
54	0	9.734 9393	326	9.810 8566	462	0.189 1434	9.924 0827	136	0	6
	10	9.734 9719	325	9.810 9028	462	0.189 0972	9.924 0691	136	50	
	20	9.735 0044	326	9.810 9490	461	0.189 0510	9.924 0555	137	40	
	30	9.735 0370	325	9.810 9951	462	0.189 0049	9.924 0418	136	30	
	40	9.735 0695	325	9.811 0413	461	0.188 9587	9.924 0282	136	20	
	50	9.735 1020	325	9.811 0874	462	0.188 9126	9.924 0146	136	10	
55	0	9.735 1345	326	9.811 1336	462	0.188 8664	9.924 0010	137	0	5
	10	9.735 1671	325	9.811 1798	461	0.188 8202	9.923 9873	136	50	
	20	9.735 1996	325	9.811 2259	462	0.188 7741	9.923 9737	136	40	
	30	9.735 2321	325	9.811 2721	461	0.188 7279	9.923 9601	137	30	
	40	9.735 2646	325	9.811 3182	462	0.188 6818	9.923 9464	136	20	
	50	9.735 2971	325	9.811 3644	461	0.188 6356	9.923 9328	137	10	
56	0	9.735 3296	325	9.811 4105	461	0.188 5895	9.923 9191	136	0	4
	10	9.735 3621	325	9.811 4566	462	0.188 5434	9.923 9055	136	50	
	20	9.735 3946	325	9.811 5028	461	0.188 4972	9.923 8919	137	40	
	30	9.735 4271	325	9.811 5489	462	0.188 4511	9.923 8782	136	30	
	40	9.735 4596	325	9.811 5951	461	0.188 4049	9.923 8646	137	20	
	50	9.735 4921	325	9.811 6412	461	0.188 3588	9.923 8509	136	10	
57	0	9.735 5246	325	9.811 6873	461	0.188 3127	9.923 8373	137	0	3
	10	9.735 5571	325	9.811 7334	462	0.188 2666	9.923 8236	136	50	
	20	9.735 5896	324	9.811 7796	461	0.188 2204	9.923 8100	137	40	
	30	9.735 6220	325	9.811 8257	461	0.188 1743	9.923 7963	136	30	
	40	9.735 6545	325	9.811 8718	462	0.188 1282	9.923 7827	137	20	
	50	9.735 6870	325	9.811 9180	461	0.188 0820	9.923 7690	136	10	
58	0	9.735 7195	324	9.811 9641	461	0.188 0359	9.923 7554	137	0	2
	10	9.735 7519	325	9.812 0102	461	0.187 9898	9.923 7417	136	50	
	20	9.735 7844	324	9.812 0563	461	0.187 9437	9.923 7281	137	40	
	30	9.735 8168	325	9.812 1024	461	0.187 8976	9.923 7144	137	30	
	40	9.735 8493	324	9.812 1485	461	0.187 8515	9.923 7007	136	20	
	50	9.735 8817	325	9.812 1946	462	0.187 8054	9.923 6871	137	10	
59	0	9.735 9142	324	9.812 2408	461	0.187 7592	9.923 6734	136	0	1
	10	9.735 9466	324	9.812 2869	461	0.187 7131	9.923 6598	137	50	
	20	9.735 9790	325	9.812 3330	461	0.187 6670	9.923 6461	137	40	
	30	9.736 0115	324	9.812 3791	461	0.187 6209	9.923 6324	137	30	
	40	9.736 0439	324	9.812 4252	461	0.187 5748	9.923 6187	136	20	
	50	9.736 0763	325	9.812 4713	461	0.187 5287	9.923 6051	137	10	
60	0	9.736 1088		9.812 5174		0.187 4826	9.923 5914		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

57°

462	
1	46.2
2	92.4
3	138.6
4	184.8
5	231.0
6	277.2
7	323.4
8	369.6
9	415.8

461	
1	46.1
2	92.2
3	138.3
4	184.4
5	230.5
6	276.6
7	322.7
8	368.8
9	414.9

326	
1	32.6
2	65.2
3	97.8
4	130.4
5	163.0
6	195.6
7	228.2
8	260.8
9	293.4

325	
1	32.5
2	65.0
3	97.5
4	130.0
5	162.5
6	195.0
7	227.5
8	260.0
9	292.5

324	
1	32.4
2	64.8
3	97.2
4	129.6
5	162.0
6	194.4
7	226.8
8	259.2
9	291.6

137	
1	13.7
2	27.4
3	41.1
4	54.8
5	68.5
6	82.2
7	95.9
8	109.6
9	123.3

33°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.736 1088	324	9.812 5174	461	0.187 4826	9.923 5914	137	0	60
	10	9.736 1412	324	9.812 5635	460	0.187 4365	9.923 5777	136	50	
	20	9.736 1736	324	9.812 6095	461	0.187 3905	9.923 5641	137	40	
	30	9.736 2060	324	9.812 6556	461	0.187 3444	9.923 5504	137	30	
	40	9.736 2384	324	9.812 7017	461	0.187 2983	9.923 5367	137	20	
	50	9.736 2708	324	9.812 7478	461	0.187 2522	9.923 5230	137	10	
1	0	9.736 3032	324	9.812 7939	461	0.187 2061	9.923 5093	136	0	59
	10	9.736 3356	324	9.812 8400	461	0.187 1600	9.923 4957	137	50	
	20	9.736 3680	324	9.812 8861	460	0.187 1139	9.923 4820	137	40	
	30	9.736 4004	324	9.812 9321	461	0.187 0679	9.923 4683	137	30	
	40	9.736 4328	324	9.812 9782	461	0.187 0218	9.923 4546	137	20	
	50	9.736 4652	324	9.813 0243	461	0.186 9757	9.923 4409	137	10	
2	0	9.736 4976	324	9.813 0704	460	0.186 9296	9.923 4272	137	0	58
	10	9.736 5300	323	9.813 1164	461	0.186 8836	9.923 4135	137	50	
	20	9.736 5623	324	9.813 1625	461	0.186 8375	9.923 3998	137	40	
	30	9.736 5947	324	9.813 2086	460	0.186 7914	9.923 3861	137	30	
	40	9.736 6271	323	9.813 2546	461	0.186 7454	9.923 3724	137	20	
	50	9.736 6594	324	9.813 3007	461	0.186 6993	9.923 3587	137	10	
3	0	9.736 6918	324	9.813 3468	460	0.186 6532	9.923 3450	137	0	57
	10	9.736 7242	323	9.813 3928	461	0.186 6072	9.923 3313	137	50	
	20	9.736 7565	324	9.813 4389	460	0.186 5611	9.923 3176	137	40	
	30	9.736 7889	323	9.813 4849	461	0.186 5151	9.923 3039	137	30	
	40	9.736 8212	324	9.813 5310	460	0.186 4690	9.923 2902	137	20	
	50	9.736 8536	323	9.813 5770	461	0.186 4230	9.923 2765	137	10	
4	0	9.736 8859	323	9.813 6231	460	0.186 3769	9.923 2628	137	0	56
	10	9.736 9182	324	9.813 6691	461	0.186 3309	9.923 2491	137	50	
	20	9.736 9506	323	9.813 7152	460	0.186 2848	9.923 2354	137	40	
	30	9.736 9829	323	9.813 7612	461	0.186 2388	9.923 2217	137	30	
	40	9.737 0152	324	9.813 8073	460	0.186 1927	9.923 2080	137	20	
	50	9.737 0476	323	9.813 8533	460	0.186 1467	9.923 1943	138	10	
5	0	9.737 0799	323	9.813 8993	461	0.186 1007	9.923 1805	137	0	55
	10	9.737 1122	323	9.813 9454	460	0.186 0546	9.923 1668	137	50	
	20	9.737 1445	323	9.813 9914	460	0.186 0086	9.923 1531	137	40	
	30	9.737 1768	323	9.814 0374	461	0.185 9626	9.923 1394	137	30	
	40	9.737 2091	323	9.814 0835	460	0.185 9165	9.923 1257	138	20	
	50	9.737 2414	323	9.814 1295	460	0.185 8705	9.923 1119	137	10	
6	0	9.737 2737	323	9.814 1755	460	0.185 8245	9.923 0982	137	0	54
	10	9.737 3060	323	9.814 2215	461	0.185 7785	9.923 0845	137	50	
	20	9.737 3383	323	9.814 2676	460	0.185 7324	9.923 0708	138	40	
	30	9.737 3706	323	9.814 3136	460	0.185 6864	9.923 0570	137	30	
	40	9.737 4029	323	9.814 3596	460	0.185 6404	9.923 0433	137	20	
	50	9.737 4352	323	9.814 4056	460	0.185 5944	9.923 0296	138	10	
7	0	9.737 4675	322	9.814 4516	460	0.185 5484	9.923 0158	137	0	53
	10	9.737 4997	323	9.814 4976	460	0.185 5024	9.923 0021	137	50	
	20	9.737 5320	323	9.814 5436	461	0.185 4564	9.922 9884	138	40	
	30	9.737 5643	323	9.814 5897	460	0.185 4103	9.922 9746	137	30	
	40	9.737 5966	322	9.814 6357	460	0.185 3643	9.922 9609	138	20	
	50	9.737 6288	323	9.814 6817	460	0.185 3183	9.922 9471	137	10	
8	0	9.737 6611	322	9.814 7277	460	0.185 2723	9.922 9334	137	0	52
	10	9.737 6933	323	9.814 7737	460	0.185 2263	9.922 9197	138	50	
	20	9.737 7256	322	9.814 8197	460	0.185 1803	9.922 9059	137	40	
	30	9.737 7578	323	9.814 8657	460	0.185 1343	9.922 8922	138	30	
	40	9.737 7901	322	9.814 9117	459	0.185 0883	9.922 8784	137	20	
	50	9.737 8223	323	9.814 9576	460	0.185 0424	9.922 8647	138	10	
9	0	9.737 8546	322	9.815 0036	460	0.184 9964	9.922 8509	137	0	51
	10	9.737 8868	322	9.815 0496	460	0.184 9504	9.922 8372	138	50	
	20	9.737 9190	323	9.815 0956	460	0.184 9044	9.922 8234	137	40	
	30	9.737 9513	322	9.815 1416	460	0.184 8584	9.922 8097	138	30	
	40	9.737 9835	322	9.815 1876	460	0.184 8124	9.922 7959	138	20	
	50	9.738 0157	322	9.815 2336	459	0.184 7664	9.922 7821	137	10	
10	0	9.738 0479		9.815 2795		0.184 7205	9.922 7684		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

	461
1	46.1
2	92.2
3	138.3
4	184.4
5	230.5
6	276.6
7	322.7
8	368.8
9	414.9

	460
1	46.0
2	92.0
3	138.0
4	184.0
5	230.0
6	276.0
7	322.0
8	368.0
9	414.0

	324
1	32.4
2	64.8
3	97.2
4	129.6
5	162.0
6	194.4
7	226.8
8	259.2
9	291.6

	323
1	32.3
2	64.6
3	96.9
4	129.2
5	161.5
6	193.8
7	226.1
8	258.4
9	290.7

	137
1	13.7
2	27.4
3	41.1
4	54.8
5	68.5
6	82.2
7	95.9
8	109.6
9	123.3

	138
1	13.8
2	27.6
3	41.4
4	55.2
5	69.0
6	82.8
7	96.6
8	110.4
9	124.2

56°

33°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.738 0479	322	9.815 2795	460	0.184 7205	9.922 7684	138	0	50
	10	9.738 0801	322	9.815 3255	460	0.184 6745	9.922 7546	137	50	
	20	9.738 1123	323	9.815 3715	460	0.184 6285	9.922 7409	138	40	
	30	9.738 1446	322	9.815 4175	459	0.184 5825	9.922 7271	138	30	
	40	9.738 1768	322	9.815 4634	460	0.184 5366	9.922 7133	137	20	
	50	9.738 2090	322	9.815 5094	460	0.184 4906	9.922 6996	138	10	
11	0	9.738 2412	322	9.815 5554	459	0.184 4446	9.922 6858	138	0	49
	10	9.738 2734	321	9.815 6013	460	0.184 3987	9.922 6720	137	50	
	20	9.738 3055	322	9.815 6473	460	0.184 3527	9.922 6583	138	40	
	30	9.738 3377	322	9.815 6933	459	0.184 3067	9.922 6445	138	30	
	40	9.738 3699	322	9.815 7392	460	0.184 2608	9.922 6307	138	20	
	50	9.738 4021	322	9.815 7852	459	0.184 2148	9.922 6169	137	10	
12	0	9.738 4343	321	9.815 8311	460	0.184 1689	9.922 6032	138	0	48
	10	9.738 4664	322	9.815 8771	459	0.184 1229	9.922 5894	138	50	
	20	9.738 4986	322	9.815 9230	460	0.184 0770	9.922 5756	138	40	
	30	9.738 5308	321	9.815 9690	459	0.184 0310	9.922 5618	138	30	
	40	9.738 5629	322	9.816 0149	460	0.183 9851	9.922 5480	138	20	
	50	9.738 5951	322	9.816 0609	459	0.183 9391	9.922 5342	137	10	
13	0	9.738 6273	321	9.816 1068	460	0.183 8932	9.922 5205	138	0	47
	10	9.738 6594	322	9.816 1528	459	0.183 8472	9.922 5067	138	50	
	20	9.738 6916	321	9.816 1987	459	0.183 8013	9.922 4929	138	40	
	30	9.738 7237	322	9.816 2446	460	0.183 7554	9.922 4791	138	30	
	40	9.738 7559	321	9.816 2906	459	0.183 7094	9.922 4653	138	20	
	50	9.738 7880	321	9.816 3365	459	0.183 6635	9.922 4515	138	10	
14	0	9.738 8201	322	9.816 3824	460	0.183 6176	9.922 4377	138	0	46
	10	9.738 8523	321	9.816 4284	459	0.183 5716	9.922 4239	138	50	
	20	9.738 8844	321	9.816 4743	459	0.183 5257	9.922 4101	138	40	
	30	9.738 9165	321	9.816 5202	459	0.183 4798	9.922 3963	138	30	
	40	9.738 9486	322	9.816 5661	460	0.183 4339	9.922 3825	138	20	
	50	9.738 9808	321	9.816 6121	459	0.183 3879	9.922 3687	138	10	
15	0	9.739 0129	321	9.816 6580	459	0.183 3420	9.922 3549	138	0	45
	10	9.739 0450	321	9.816 7039	459	0.183 2961	9.922 3411	138	50	
	20	9.739 0771	321	9.816 7498	459	0.183 2502	9.922 3273	138	40	
	30	9.739 1092	321	9.816 7957	459	0.183 2043	9.922 3135	138	30	
	40	9.739 1413	321	9.816 8416	459	0.183 1584	9.922 2997	138	20	
	50	9.739 1734	321	9.816 8875	460	0.183 1125	9.922 2859	138	10	
16	0	9.739 2055	321	9.816 9335	459	0.183 0665	9.922 2721	139	0	44
	10	9.739 2376	321	9.816 9794	459	0.183 0206	9.922 2582	138	50	
	20	9.739 2697	321	9.817 0253	459	0.182 9747	9.922 2444	138	40	
	30	9.739 3018	321	9.817 0712	459	0.182 9288	9.922 2306	138	30	
	40	9.739 3339	320	9.817 1171	459	0.182 8829	9.922 2168	138	20	
	50	9.739 3659	321	9.817 1630	459	0.182 8370	9.922 2030	139	10	
17	0	9.739 3980	321	9.817 2089	459	0.182 7911	9.922 1891	138	0	43
	10	9.739 4301	321	9.817 2548	459	0.182 7452	9.922 1753	138	50	
	20	9.739 4622	320	9.817 3007	458	0.182 6993	9.922 1615	138	40	
	30	9.739 4942	321	9.817 3465	459	0.182 6535	9.922 1477	138	30	
	40	9.739 5263	320	9.817 3924	459	0.182 6076	9.922 1339	139	20	
	50	9.739 5583	321	9.817 4383	459	0.182 5617	9.922 1200	138	10	
18	0	9.739 5904	320	9.817 4842	459	0.182 5158	9.922 1062	138	0	42
	10	9.739 6224	321	9.817 5301	459	0.182 4699	9.922 0924	139	50	
	20	9.739 6545	320	9.817 5760	458	0.182 4240	9.922 0785	138	40	
	30	9.739 6865	321	9.817 6218	459	0.182 3782	9.922 0647	138	30	
	40	9.739 7186	320	9.817 6677	459	0.182 3323	9.922 0509	139	20	
	50	9.739 7506	321	9.817 7136	459	0.182 2864	9.922 0370	138	10	
19	0	9.739 7827	320	9.817 7595	458	0.182 2405	9.922 0232	139	0	41
	10	9.739 8147	320	9.817 8053	459	0.182 1947	9.922 0093	138	50	
	20	9.739 8467	320	9.817 8512	459	0.182 1488	9.921 9955	138	40	
	30	9.739 8787	321	9.817 8971	458	0.182 1029	9.921 9817	139	30	
	40	9.739 9108	320	9.817 9429	459	0.182 0571	9.921 9678	138	20	
	50	9.739 9428	320	9.817 9888	459	0.182 0112	9.921 9540	139	10	
20	0	9.739 9748		9.818 0347		0.181 9653	9.921 9401		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

56°

459	
1	45.9
2	91.8
3	137.7
4	183.6
5	229.5
6	275.4
7	321.3
8	367.2
9	413.1

458	
1	45.8
2	91.6
3	137.4
4	183.2
5	229.0
6	274.8
7	320.6
8	366.4
9	412.2

322	
1	32.2
2	64.4
3	96.6
4	128.8
5	161.0
6	193.2
7	225.4
8	257.6
9	289.8

321	
1	32.1
2	64.2
3	96.3
4	128.4
5	160.5
6	192.6
7	224.7
8	256.8
9	288.9

320	
1	32.0
2	64.0
3	96.0
4	128.0
5	160.0
6	192.0
7	224.0
8	256.0
9	288.0

139	
1	13.9
2	27.8
3	41.7
4	55.6
5	69.5
6	83.4
7	97.3
8	111.2
9	125.1

33°

	459
1	45.9
2	91.8
3	137.7
4	183.6
5	229.5
6	275.4
7	321.3
8	367.2
9	413.1

	458
1	45.8
2	91.6
3	137.4
4	183.2
5	229.0
6	274.8
7	320.6
8	366.4
9	412.2

	320
1	32.0
2	64.0
3	96.0
4	128.0
5	160.0
6	192.0
7	224.0
8	256.0
9	288.0

	319
1	31.9
2	63.8
3	95.7
4	127.6
5	159.5
6	191.4
7	223.3
8	255.2
9	287.1

	138
1	13.8
2	27.6
3	41.4
4	55.2
5	69.0
6	82.8
7	96.6
8	110.4
9	124.2

	139
1	13.9
2	27.8
3	41.7
4	55.6
5	69.5
6	83.4
7	97.3
8	111.2
9	125.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.739 9748	320	9.818 0347	458	0.181 9653	9.921 9401	138	0	40
	10	9.740 0068	320	9.818 0805	459	0.181 9195	9.921 9263	139	50	
	20	9.740 0388	320	9.818 1264	458	0.181 8736	9.921 9124	138	40	
	30	9.740 0708	320	9.818 1722	459	0.181 8278	9.921 8986	139	30	
	40	9.740 1028	320	9.818 2181	459	0.181 7819	9.921 8847	138	20	
	50	9.740 1348	320	9.818 2640	458	0.181 7360	9.921 8709	139	10	
21	0	9.740 1668	320	9.818 3098	459	0.181 6902	9.921 8570	139	0	39
	10	9.740 1988	320	9.818 3557	458	0.181 6443	9.921 8431	138	50	
	20	9.740 2308	320	9.818 4015	458	0.181 5985	9.921 8293	139	40	
	30	9.740 2628	320	9.818 4473	459	0.181 5527	9.921 8154	138	30	
	40	9.740 2948	319	9.818 4932	458	0.181 5068	9.921 8016	139	20	
	50	9.740 3267	320	9.818 5390	459	0.181 4610	9.921 7877	139	10	
22	0	9.740 3587	320	9.818 5849	458	0.181 4151	9.921 7738	138	0	38
	10	9.740 3907	319	9.818 6307	458	0.181 3693	9.921 7600	139	50	
	20	9.740 4226	320	9.818 6765	459	0.181 3235	9.921 7461	139	40	
	30	9.740 4546	320	9.818 7224	458	0.181 2776	9.921 7322	138	30	
	40	9.740 4866	319	9.818 7682	458	0.181 2318	9.921 7184	139	20	
	50	9.740 5185	320	9.818 8140	459	0.181 1860	9.921 7045	139	10	
23	0	9.740 5505	319	9.818 8599	458	0.181 1401	9.921 6906	139	0	37
	10	9.740 5824	320	9.818 9057	458	0.181 0943	9.921 6767	138	50	
	20	9.740 6144	319	9.818 9515	458	0.181 0485	9.921 6629	139	40	
	30	9.740 6463	320	9.818 9973	459	0.181 0027	9.921 6490	139	30	
	40	9.740 6783	319	9.819 0432	458	0.180 9568	9.921 6351	139	20	
	50	9.740 7102	319	9.819 0890	458	0.180 9110	9.921 6212	139	10	
24	0	9.740 7421	320	9.819 1348	458	0.180 8652	9.921 6073	138	0	36
	10	9.740 7741	319	9.819 1806	458	0.180 8194	9.921 5935	139	50	
	20	9.740 8060	319	9.819 2264	458	0.180 7736	9.921 5796	139	40	
	30	9.740 8379	319	9.819 2722	458	0.180 7278	9.921 5657	139	30	
	40	9.740 8698	319	9.819 3180	458	0.180 6820	9.921 5518	139	20	
	50	9.740 9017	320	9.819 3638	458	0.180 6362	9.921 5379	139	10	
25	0	9.740 9337	319	9.819 4096	458	0.180 5904	9.921 5240	139	0	35
	10	9.740 9656	319	9.819 4554	458	0.180 5446	9.921 5101	139	50	
	20	9.740 9975	319	9.819 5012	458	0.180 4988	9.921 4962	139	40	
	30	9.741 0294	319	9.819 5470	458	0.180 4530	9.921 4823	139	30	
	40	9.741 0613	319	9.819 5928	458	0.180 4072	9.921 4684	139	20	
	50	9.741 0932	319	9.819 6386	458	0.180 3614	9.921 4545	139	10	
26	0	9.741 1251	319	9.819 6844	458	0.180 3156	9.921 4406	139	0	34
	10	9.741 1570	318	9.819 7302	458	0.180 2698	9.921 4267	139	50	
	20	9.741 1888	319	9.819 7760	458	0.180 2240	9.921 4128	139	40	
	30	9.741 2207	319	9.819 8218	458	0.180 1782	9.921 3989	139	30	
	40	9.741 2526	319	9.819 8676	458	0.180 1324	9.921 3850	139	20	
	50	9.741 2845	319	9.819 9134	458	0.180 0866	9.921 3711	139	10	
27	0	9.741 3164	318	9.819 9592	457	0.180 0408	9.921 3572	139	0	33
	10	9.741 3482	319	9.820 0049	458	0.179 9951	9.921 3433	139	50	
	20	9.741 3801	319	9.820 0507	458	0.179 9493	9.921 3294	139	40	
	30	9.741 4120	318	9.820 0965	458	0.179 9035	9.921 3155	139	30	
	40	9.741 4438	319	9.820 1423	457	0.179 8577	9.921 3016	140	20	
	50	9.741 4757	318	9.820 1880	458	0.179 8120	9.921 2876	139	10	
28	0	9.741 5075	319	9.820 2338	458	0.179 7662	9.921 2737	139	0	32
	10	9.741 5394	318	9.820 2796	457	0.179 7204	9.921 2598	139	50	
	20	9.741 5712	319	9.820 3253	458	0.179 6747	9.921 2459	139	40	
	30	9.741 6031	318	9.820 3711	458	0.179 6289	9.921 2320	140	30	
	40	9.741 6349	318	9.820 4169	457	0.179 5831	9.921 2180	139	20	
	50	9.741 6667	319	9.820 4626	458	0.179 5374	9.921 2041	139	10	
29	0	9.741 6986	318	9.820 5084	457	0.179 4916	9.921 1902	139	0	31
	10	9.741 7304	318	9.820 5541	458	0.179 4459	9.921 1763	140	50	
	20	9.741 7622	318	9.820 5999	458	0.179 4001	9.921 1623	139	40	
	30	9.741 7940	319	9.820 6457	457	0.179 3543	9.921 1484	139	30	
	40	9.741 8259	318	9.820 6914	458	0.179 3086	9.921 1345	140	20	
	50	9.741 8577	318	9.820 7372	457	0.179 2628	9.921 1205	139	10	
30	0	9.741 8895		9.820 7829		0.179 2171	9.921 1066		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

56°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.741 8895	318	9.820 7829	458	0.179 2171	9.921 1066	139	0	30
	10	9.741 9213	318	9.820 8287	457	0.179 1713	9.921 0927	140	50	
	20	9.741 9531	318	9.820 8744	457	0.179 1256	9.921 0787	139	40	
	30	9.741 9849	318	9.820 9201	458	0.179 0799	9.921 0648	140	30	
	40	9.742 0167	318	9.820 9659	457	0.179 0341	9.921 0508	139	20	
	50	9.742 0485	318	9.821 0116	458	0.178 9884	9.921 0369	140	10	
31	0	9.742 0803	318	9.821 0574	457	0.178 9426	9.921 0229	139	0	29
	10	9.742 1121	318	9.821 1031	457	0.178 8969	9.921 0090	139	50	
	20	9.742 1439	318	9.821 1488	458	0.178 8512	9.920 9951	140	40	
	30	9.742 1757	317	9.821 1946	457	0.178 8054	9.920 9811	139	30	
	40	9.742 2074	318	9.821 2403	457	0.178 7597	9.920 9672	140	20	
	50	9.742 2392	318	9.821 2860	457	0.178 7140	9.920 9532	139	10	
32	0	9.742 2710	318	9.821 3317	458	0.178 6683	9.920 9393	140	0	28
	10	9.742 3028	317	9.821 3775	457	0.178 6225	9.920 9253	140	50	
	20	9.742 3345	318	9.821 4232	457	0.178 5768	9.920 9113	139	40	
	30	9.742 3663	317	9.821 4689	457	0.178 5311	9.920 8974	140	30	
	40	9.742 3980	318	9.821 5146	457	0.178 4854	9.920 8834	139	20	
	50	9.742 4298	318	9.821 5603	457	0.178 4397	9.920 8695	140	10	
33	0	9.742 4616	317	9.821 6060	458	0.178 3940	9.920 8555	140	0	27
	10	9.742 4933	317	9.821 6518	457	0.178 3482	9.920 8415	139	50	
	20	9.742 5250	318	9.821 6975	457	0.178 3025	9.920 8276	140	40	
	30	9.742 5568	317	9.821 7432	457	0.178 2568	9.920 8136	140	30	
	40	9.742 5885	318	9.821 7889	457	0.178 2111	9.920 7996	139	20	
	50	9.742 6203	317	9.821 8346	457	0.178 1654	9.920 7857	140	10	
34	0	9.742 6520	317	9.821 8803	457	0.178 1197	9.920 7717	140	0	26
	10	9.742 6837	317	9.821 9260	457	0.178 0740	9.920 7577	139	50	
	20	9.742 7154	318	9.821 9717	457	0.178 0283	9.920 7438	140	40	
	30	9.742 7472	317	9.822 0174	457	0.177 9826	9.920 7298	140	30	
	40	9.742 7789	317	9.822 0631	457	0.177 9369	9.920 7158	140	20	
	50	9.742 8106	317	9.822 1088	457	0.177 8912	9.920 7018	140	10	
35	0	9.742 8423	317	9.822 1545	457	0.177 8455	9.920 6878	139	0	25
	10	9.742 8740	317	9.822 2002	457	0.177 7998	9.920 6739	140	50	
	20	9.742 9057	317	9.822 2459	456	0.177 7541	9.920 6599	140	40	
	30	9.742 9374	317	9.822 2915	457	0.177 7085	9.920 6459	140	30	
	40	9.742 9691	317	9.822 3372	457	0.177 6628	9.920 6319	140	20	
	50	9.743 0008	317	9.822 3829	457	0.177 6171	9.920 6179	140	10	
36	0	9.743 0325	317	9.822 4286	457	0.177 5714	9.920 6039	140	0	24
	10	9.743 0642	317	9.822 4743	456	0.177 5257	9.920 5899	139	50	
	20	9.743 0959	317	9.822 5199	457	0.177 4801	9.920 5760	140	40	
	30	9.743 1276	317	9.822 5656	457	0.177 4344	9.920 5620	140	30	
	40	9.743 1593	316	9.822 6113	457	0.177 3887	9.920 5480	140	20	
	50	9.743 1909	317	9.822 6570	456	0.177 3430	9.920 5340	140	10	
37	0	9.743 2226	317	9.822 7026	457	0.177 2974	9.920 5200	140	0	23
	10	9.743 2543	316	9.822 7483	457	0.177 2517	9.920 5060	140	50	
	20	9.743 2859	317	9.822 7940	456	0.177 2060	9.920 4920	140	40	
	30	9.743 3176	317	9.822 8396	457	0.177 1604	9.920 4780	140	30	
	40	9.743 3493	316	9.822 8853	456	0.177 1147	9.920 4640	140	20	
	50	9.743 3809	317	9.822 9309	457	0.177 0691	9.920 4500	140	10	
38	0	9.743 4126	316	9.822 9766	457	0.177 0234	9.920 4360	140	0	22
	10	9.743 4442	317	9.823 0223	456	0.176 9777	9.920 4220	141	50	
	20	9.743 4759	316	9.823 0679	457	0.176 9321	9.920 4079	140	40	
	30	9.743 5075	316	9.823 1136	456	0.176 8864	9.920 3939	140	30	
	40	9.743 5391	317	9.823 1592	457	0.176 8408	9.920 3799	140	20	
	50	9.743 5708	316	9.823 2049	456	0.176 7951	9.920 3659	140	10	
39	0	9.743 6024	316	9.823 2505	457	0.176 7495	9.920 3519	140	0	21
	10	9.743 6340	317	9.823 2962	456	0.176 7038	9.920 3379	140	50	
	20	9.743 6657	316	9.823 3418	456	0.176 6582	9.920 3239	141	40	
	30	9.743 6973	316	9.823 3874	457	0.176 6126	9.920 3098	140	30	
	40	9.743 7289	316	9.823 4331	456	0.176 5669	9.920 2958	140	20	
	50	9.743 7605	316	9.823 4787	457	0.176 5213	9.920 2818	140	10	
40	0	9.743 7921		9.823 5244		0.176 4756	9.920 2678		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	457
1	45.7
2	91.4
3	137.1
4	182.8
5	228.5
6	274.2
7	319.9
8	365.6
9	411.3

	456
1	45.6
2	91.2
3	136.8
4	182.4
5	228.0
6	273.6
7	319.2
8	364.8
9	410.4

	318
1	31.8
2	63.6
3	95.4
4	127.2
5	159.0
6	190.8
7	222.6
8	254.4
9	286.2

	317
1	31.7
2	63.4
3	95.1
4	126.8
5	158.5
6	190.2
7	221.9
8	253.6
9	285.3

	316
1	31.6
2	63.2
3	94.8
4	126.4
5	158.0
6	189.6
7	221.2
8	252.8
9	284.4

	140
1	14.0
2	28.0
3	42.0
4	56.0
5	70.0
6	84.0
7	98.0
8	112.0
9	126.0

33°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.743 7921	316	9.823 5244	456	0.176 4756	9.920 2678	140	0	20
	10	9.743 8237	317	9.823 5700	456	0.176 4300	9.920 2538	141	50	
	20	9.743 8554	316	9.823 6156	457	0.176 3844	9.920 2397	140	40	
	30	9.743 8870	316	9.823 6613	456	0.176 3387	9.920 2257	140	30	
	40	9.743 9186	316	9.823 7069	456	0.176 2931	9.920 2117	141	20	
	50	9.743 9502	315	9.823 7525	456	0.176 2475	9.920 1976	140	10	
41	0	9.743 9817	316	9.823 7981	457	0.176 2019	9.920 1836	140	0	19
	10	9.744 0133	316	9.823 8438	456	0.176 1562	9.920 1696	141	50	
	20	9.744 0449	316	9.823 8894	456	0.176 1106	9.920 1555	140	40	
	30	9.744 0765	316	9.823 9350	456	0.176 0650	9.920 1415	140	30	
	40	9.744 1081	316	9.823 9806	456	0.176 0194	9.920 1275	141	20	
	50	9.744 1397	315	9.824 0262	457	0.175 9738	9.920 1134	140	10	
42	0	9.744 1712	316	9.824 0719	456	0.175 9281	9.920 0994	141	0	18
	10	9.744 2028	316	9.824 1175	456	0.175 8825	9.920 0853	140	50	
	20	9.744 2344	315	9.824 1631	456	0.175 8369	9.920 0713	141	40	
	30	9.744 2659	316	9 824 2087	456	0.175 7913	9.920 0572	140	30	
	40	9.744 2975	315	9.824 2543	456	0.175 7457	9.920 0432	141	20	
	50	9.744 3290	316	9.824 2999	456	0.175 7001	9.920 0291	140	10	
43	0	9.744 3606	315	9.824 3455	456	0.175 6545	9.920 0151	141	0	17
	10	9.744 3921	316	9.824 3911	456	0.175 6089	9.920 0010	140	50	
	20	9.744 4237	315	9.824 4367	456	0.175 5633	9.919 9870	141	40	
	30	9.744 4552	316	9.824 4823	456	0.175 5177	9.919 9729	140	30	
	40	9.744 4868	315	9.824 5279	456	0.175 4721	9.919 9589	141	20	
	50	9.744 5183	315	9.824 5735	456	0.175 4265	9.919 9448	140	10	
44	0	9.744 5498	316	9.824 6191	456	0.175 3809	9.919 9308	141	0	16
	10	9.744 5814	315	9.824 6647	456	0.175 3353	9.919 9167	141	50	
	20	9.744 6129	315	9.824 7103	455	0.175 2897	9.919 9026	140	40	
	30	9.744 6444	315	9.824 7558	456	0.175 2442	9.919 8886	141	30	
	40	9.744 6759	316	9.824 8014	456	0.175 1986	9.919 8745	141	20	
	50	9.744 7075	315	9.824 8470	456	0.175 1530	9.919 8604	140	10	
45	0	9.744 7390	315	9.824 8926	456	0.175 1074	9.919 8464	141	0	15
	10	9.744 7705	315	9.824 9382	455	0.175 0618	9.919 8323	141	50	
	20	9.744 8020	315	9.824 9837	456	0.175 0163	9.919 8182	140	40	
	30	9.744 8335	315	9.825 0293	456	0.174 9707	9.919 8042	141	30	
	40	9.744 8650	315	9.825 0749	456	0.174 9251	9.919 7901	141	20	
	50	9.744 8965	315	9.825 1205	455	0.174 8795	9.919 7760	141	10	
46	0	9.744 9280	315	9.825 1660	456	0.174 8340	9.919 7619	140	0	14
	10	9.744 9595	315	9.825 2116	456	0.174 7884	9.919 7479	141	50	
	20	9.744 9910	314	9.825 2572	455	0.174 7428	9.919 7338	141	40	
	30	9.745 0224	315	9.825 3027	456	0.174 6973	9.919 7197	141	30	
	40	9.745 0539	315	9.825 3483	456	0.174 6517	9.919 7056	141	20	
	50	9.745 0854	315	9.825 3939	455	0.174 6061	9.919 6915	140	10	
47	0	9.745 1169	314	9.825 4394	456	0.174 5606	9.919 6775	141	0	13
	10	9.745 1483	315	9.825 4850	455	0.174 5150	9.919 6634	141	50	
	20	9.745 1798	315	9.825 5305	456	0.174 4695	9.919 6493	141	40	
	30	9.745 2113	314	9.825 5761	455	0.174 4239	9.919 6352	141	30	
	40	9.745 2427	315	9.825 6216	456	0.174 3784	9.919 6211	141	20	
	50	9.745 2742	314	9.825 6672	455	0.174 3328	9.919 6070	141	10	
48	0	9.745 3056	315	9.825 7127	456	0.174 2873	9.919 5929	141	0	12
	10	9.745 3371	314	9.825 7583	455	0.174 2417	9.919 5788	141	50	
	20	9.745 3685	315	9.825 8038	456	0.174 1962	9.919 5647	141	40	
	30	9.745 4000	314	9.825 8494	455	0.174 1506	9.919 5506	141	30	
	40	9.745 4314	315	9.825 8949	455	0.174 1051	9.919 5365	141	20	
	50	9.745 4629	314	9.825 9404	456	0.174 0596	9.919 5224	141	10	
49	0	9.745 4943	314	9.825 9860	455	0.174 0140	9.919 5083	141	0	11
	10	9.745 5257	314	9.826 0315	455	0.173 9685	9.919 4942	141	50	
	20	9.745 5571	315	9.826 0770	456	0.173 9230	9.919 4801	141	40	
	30	9.745 5886	314	9.826 1226	455	0.173 8774	9.919 4660	141	30	
	40	9.745 6200	314	9.826 1681	455	0.173 8319	9.919 4519	141	20	
	50	9.745 6514	314	9.826 2136	456	0.173 7864	9.919 4378	141	10	
50	0	9.745 6828		9.826 2592		0.173 7408	9.919 4237		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

56°

	457
1	45.7
2	91.4
3	137.1
4	182.8
5	228.5
6	274.2
7	319.9
8	365.6
9	411.3

	456
1	45.6
2	91.2
3	136.8
4	182.4
5	228.0
6	273.6
7	319.2
8	364.8
9	410.4

	316
1	31.6
2	63.2
3	94.8
4	126.4
5	158.0
6	189.6
7	221.2
8	252.8
9	284.4

	315
1	31.5
2	63.0
3	94.5
4	126.0
5	157.5
6	189.0
7	220.5
8	252.0
9	283.5

	140
1	14.0
2	28.0
3	42.0
4	56.0
5	70.0
6	84.0
7	98.0
8	112.0
9	126.0

	141
1	14.1
2	28.2
3	42.3
4	56.4
5	70.5
6	84.6
7	98.7
8	112.8
9	126.9

33°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.745 6828	314	9.826 2592	455	0.173 7408	9.919 4237	142	0	10
	10	9.745 7142	314	9.826 3047	455	0.173 6953	9.919 4095	141	50	
	20	9.745 7456	314	9.826 3502	455	0.173 6498	9.919 3954	141	40	
	30	9.745 7770	314	9.826 3957	456	0.173 6043	9.919 3813	141	30	
	40	9.745 8084	314	9.826 4413	455	0.173 5587	9.919 3672	141	20	
	50	9.745 8398	314	9.826 4868	455	0.173 5132	9.919 3531	141	10	
51	0	9.745 8712	314	9.826 5323	455	0.173 4677	9.919 3390	142	0	9
	10	9.745 9026	314	9.826 5778	455	0.173 4222	9.919 3248	141	50	
	20	9.745 9340	314	9.826 6233	455	0.173 3767	9.919 3107	141	40	
	30	9.745 9654	314	9.826 6688	455	0.173 3312	9.919 2966	141	30	
	40	9.745 9968	314	9.826 7143	455	0.173 2857	9.919 2825	142	20	
	50	9.746 0282	313	9.826 7598	455	0.173 2402	9.919 2683	141	10	
52	0	9.746 0595	314	9.826 8053	455	0.173 1947	9.919 2542	141	0	8
	10	9.746 0909	314	9.826 8508	455	0.173 1492	9.919 2401	142	50	
	20	9.746 1223	313	9.826 8963	455	0.173 1037	9.919 2259	141	40	
	30	9.746 1536	314	9.826 9418	455	0.173 0582	9.919 2118	141	30	
	40	9.746 1850	314	9.826 9873	455	0.173 0127	9.919 1977	142	20	
	50	9.746 2164	313	9.827 0328	455	0.172 9672	9.919 1835	141	10	
53	0	9.746 2477	314	9.827 0783	455	0.172 9217	9.919 1694	142	0	7
	10	9.746 2791	313	9.827 1238	455	0.172 8762	9.919 1552	141	50	
	20	9.746 3104	314	9.827 1693	455	0.172 8307	9.919 1411	141	40	
	30	9.746 3418	313	9.827 2148	455	0.172 7852	9.919 1270	142	30	
	40	9.746 3731	313	9.827 2603	455	0.172 7397	9.919 1128	141	20	
	50	9.746 4044	314	9.827 3058	455	0.172 6942	9.919 0987	142	10	
54	0	9.746 4358	313	9.827 3513	454	0.172 6487	9.919 0845	141	0	6
	10	9.746 4671	313	9.827 3967	455	0.172 6033	9.919 0704	142	50	
	20	9.746 4984	314	9.827 4422	455	0.172 5578	9.919 0562	141	40	
	30	9.746 5298	313	9.827 4877	455	0.172 5123	9.919 0421	142	30	
	40	9.746 5611	313	9.827 5332	454	0.172 4668	9.919 0279	141	20	
	50	9.746 5924	313	9.827 5786	455	0.172 4214	9.919 0138	142	10	
55	0	9.746 6237	313	9.827 6241	455	0.172 3759	9.918 9996	142	0	5
	10	9.746 6550	313	9.827 6696	454	0.172 3304	9.918 9854	141	50	
	20	9.746 6863	313	9.827 7150	455	0.172 2850	9.918 9713	142	40	
	30	9.746 7176	313	9.827 7605	455	0.172 2395	9.918 9571	141	30	
	40	9.746 7489	313	9.827 8060	454	0.172 1940	9.918 9430	142	20	
	50	9.746 7802	313	9.827 8514	455	0.172 1486	9.918 9288	142	10	
56	0	9.746 8115	313	9.827 8969	455	0.172 1031	9.918 9146	141	0	4
	10	9.746 8428	313	9.827 9424	454	0.172 0576	9.918 9005	142	50	
	20	9.746 8741	313	9.827 9878	455	0.172 0122	9.918 8863	142	40	
	30	9.746 9054	313	9.828 0333	454	0.171 9667	9.918 8721	141	30	
	40	9.746 9367	313	9.828 0787	455	0.171 9213	9.918 8580	142	20	
	50	9.746 9680	312	9.828 1242	454	0.171 8758	9.918 8438	142	10	
57	0	9.746 9992	313	9.828 1696	455	0.171 8304	9.918 8296	142	0	3
	10	9.747 0305	313	9.828 2151	454	0.171 7849	9.918 8154	141	50	
	20	9.747 0618	312	9.828 2605	455	0.171 7395	9.918 8013	142	40	
	30	9.747 0930	313	9.828 3060	454	0.171 6940	9.918 7871	142	30	
	40	9.747 1243	313	9.828 3514	455	0.171 6486	9.918 7729	142	20	
	50	9.747 1556	312	9.828 3969	454	0.171 6031	9.918 7587	142	10	
58	0	9.747 1868	313	9.828 4423	454	0.171 5577	9.918 7445	142	0	2
	10	9.747 2181	312	9.828 4877	455	0.171 5123	9.918 7303	141	50	
	20	9.747 2493	313	9.828 5332	454	0.171 4668	9.918 7162	142	40	
	30	9.747 2806	312	9.828 5786	454	0.171 4214	9.918 7020	142	30	
	40	9.747 3118	313	9.828 6240	455	0.171 3760	9.918 6878	142	20	
	50	9.747 3431	312	9.828 6695	454	0.171 3305	9.918 6736	142	10	
59	0	9.747 3743	312	9.828 7149	454	0.171 2851	9.918 6594	142	0	1
	10	9.747 4055	313	9.828 7603	455	0.171 2397	9.918 6452	142	50	
	20	9.747 4368	312	9.828 8058	454	0.171 1942	9.918 6310	142	40	
	30	9.747 4680	312	9.828 8512	454	0.171 1488	9.918 6168	142	30	
	40	9.747 4992	312	9.828 8966	454	0.171 1034	9.918 6026	142	20	
	50	9.747 5304	313	9.828 9420	454	0.171 0580	9.918 5884	142	10	
60	0	9.747 5617		9.828 9874		0.171 0126	9.918 5742		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

56°

	455
1	45.5
2	91.0
3	136.5
4	182.0
5	227.5
6	273.0
7	318.5
8	364.0
9	409.5

	454
1	45.4
2	90.8
3	136.2
4	181.6
5	227.0
6	272.4
7	317.8
8	363.2
9	408.6

	314
1	31.4
2	62.8
3	94.2
4	125.6
5	157.0
6	188.4
7	219.8
8	251.2
9	282.6

	313
1	31.3
2	62.6
3	93.9
4	125.2
5	156.5
6	187.8
7	219.1
8	250.4
9	281.7

	312
1	31.2
2	62.4
3	93.6
4	124.8
5	156.0
6	187.2
7	218.4
8	249.6
9	280.8

	142
1	14.2
2	28.4
3	42.6
4	56.8
5	71.0
6	85.2
7	99.4
8	113.6
9	127.8

34°

455	
1	45.5
2	91.0
3	136.5
4	182.0
5	227.5
6	273.0
7	318.5
8	364.0
9	409.5

454	
1	45.4
2	90.8
3	136.2
4	181.6
5	227.0
6	272.4
7	317.8
8	363.2
9	408.6

312	
1	31.2
2	62.4
3	93.6
4	124.8
5	156.0
6	187.2
7	218.4
8	249.6
9	280.8

311	
1	31.1
2	62.2
3	93.3
4	124.4
5	155.5
6	186.6
7	217.7
8	248.8
9	279.9

310	
1	31.0
2	62.0
3	93.0
4	124.0
5	155.0
6	186.0
7	217.0
8	248.0
9	279.0

142	
1	14.2
2	28.4
3	42.6
4	56.8
5	71.0
6	85.2
7	99.4
8	113.6
9	127.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.747 5617	312	9.828 9874	455	0.171 0126	9.918 5742	142	0	60
	10	9.747 5929	312	9.829 0329	454	0.170 9671	9.918 5600	142	50	
	20	9.747 6241	312	9.829 0783	454	0.170 9217	9.918 5458	142	40	
	30	9.747 6553	312	9.829 1237	454	0.170 8763	9.918 5316	142	30	
	40	9.747 6865	312	9.829 1691	454	0.170 8309	9.918 5174	142	20	
	50	9.747 7177	312	9.829 2145	454	0.170 7855	9.918 5032	142	10	
1	0	9.747 7489	312	9.829 2599	454	0.170 7401	9.918 4890	142	0	59
	10	9.747 7801	312	9.829 3053	454	0.170 6947	9.918 4748	142	50	
	20	9.747 8113	312	9.829 3507	454	0.170 6493	9.918 4606	143	40	
	30	9.747 8425	311	9.829 3961	454	0.170 6039	9.918 4463	142	30	
	40	9.747 8736	312	9.829 4415	454	0.170 5585	9.918 4321	142	20	
	50	9.747 9048	312	9.829 4869	454	0.170 5131	9.918 4179	142	10	
2	0	9.747 9360	312	9.829 5323	454	0.170 4677	9.918 4037	142	0	58
	10	9.747 9672	312	9.829 5777	454	0.170 4223	9.918 3895	143	50	
	20	9.747 9984	311	9.829 6231	454	0.170 3769	9.918 3752	142	40	
	30	9.748 0295	312	9.829 6685	454	0.170 3315	9.918 3610	142	30	
	40	9.748 0607	311	9.829 7139	454	0.170 2861	9.918 3468	142	20	
	50	9.748 0918	312	9.829 7593	454	0.170 2407	9.918 3326	143	10	
3	0	9.748 1230	312	9.829 8047	453	0.170 1953	9.918 3183	142	0	57
	10	9.748 1542	311	9.829 8500	454	0.170 1500	9.918 3041	142	50	
	20	9.748 1853	312	9.829 8954	454	0.170 1046	9.918 2899	143	40	
	30	9.748 2165	311	9.829 9408	454	0.170 0592	9.918 2756	142	30	
	40	9.748 2476	311	9.829 9862	454	0.170 0138	9.918 2614	142	20	
	50	9.748 2787	312	9.830 0316	453	0.169 9684	9.918 2472	143	10	
4	0	9.748 3099	311	9.830 0769	454	0.169 9231	9.918 2329	142	0	56
	10	9.748 3410	312	9.830 1223	454	0.169 8777	9.918 2187	142	50	
	20	9.748 3722	311	9.830 1677	454	0.169 8323	9.918 2045	143	40	
	30	9.748 4033	311	9.830 2131	453	0.169 7869	9.918 1902	142	30	
	40	9.748 4344	311	9.830 2584	454	0.169 7416	9.918 1760	143	20	
	50	9.748 4655	312	9.830 3038	454	0.169 6962	9.918 1617	142	10	
5	0	9.748 4967	311	9.830 3492	453	0.169 6508	9.918 1475	143	0	55
	10	9.748 5278	311	9.830 3945	454	0.169 6055	9.918 1332	142	50	
	20	9.748 5589	311	9.830 4399	454	0.169 5601	9.918 1190	143	40	
	30	9.748 5900	311	9.830 4853	453	0.169 5147	9.918 1047	142	30	
	40	9.748 6211	311	9.830 5306	454	0.169 4694	9.918 0905	143	20	
	50	9.748 6522	311	9.830 5760	453	0.169 4240	9.918 0762	142	10	
6	0	9.748 6833	311	9.830 6213	454	0.169 3787	9.918 0620	143	0	54
	10	9.748 7144	311	9.830 6667	453	0.169 3333	9.918 0477	142	50	
	20	9.748 7455	311	9.830 7120	454	0.169 2880	9.918 0335	143	40	
	30	9.748 7766	311	9.830 7574	453	0.169 2426	9.918 0192	143	30	
	40	9.748 8077	311	9.830 8027	454	0.169 1973	9.918 0049	142	20	
	50	9.748 8388	310	9.830 8481	453	0.169 1519	9.917 9907	143	10	
7	0	9.748 8698	311	9.830 8934	454	0.169 1066	9.917 9764	142	0	53
	10	9.748 9009	311	9.830 9388	453	0.169 0612	9.917 9622	143	50	
	20	9.748 9320	311	9.830 9841	453	0.169 0159	9.917 9479	143	40	
	30	9.748 9631	310	9.831 0294	454	0.168 9706	9.917 9336	142	30	
	40	9.748 9941	311	9.831 0748	453	0.168 9252	9.917 9194	143	20	
	50	9.749 0252	310	9.831 1201	453	0.168 8799	9.917 9051	143	10	
8	0	9.749 0562	311	9.831 1654	454	0.168 8346	9.917 8908	143	0	52
	10	9.749 0873	311	9.831 2108	453	0.168 7892	9.917 8765	142	50	
	20	9.749 1184	310	9.831 2561	453	0.168 7439	9.917 8623	143	40	
	30	9.749 1494	311	9.831 3014	454	0.168 6986	9.917 8480	143	30	
	40	9.749 1805	310	9.831 3468	453	0.168 6532	9.917 8337	143	20	
	50	9.749 2115	310	9.831 3921	453	0.168 6079	9.917 8194	143	10	
9	0	9.749 2425	311	9.831 4374	453	0.168 5626	9.917 8051	142	0	51
	10	9.749 2736	310	9.831 4827	453	0.168 5173	9.917 7909	143	50	
	20	9.749 3046	311	9.831 5280	454	0.168 4720	9.917 7766	143	40	
	30	9.749 3357	310	9.831 5734	453	0.168 4266	9.917 7623	143	30	
	40	9.749 3667	310	9.831 6187	453	0.168 3813	9.917 7480	143	20	
	50	9.749 3977	310	9.831 6640	453	0.168 3360	9.917 7337	143	10	
10	0	9.749 4287		9.831 7093		0.168 2907	9.917 7194		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

55°

34°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.749 4287	310	9.831 7093	453	0.168 2907	9.917 7194	143	0	50
	10	9.749 4597	311	9.831 7546	453	0.168 2454	9.917 7051	143	50	
	20	9.749 4908	310	9.831 7999	453	0.168 2001	9.917 6908	143	40	
	30	9.749 5218	310	9.831 8452	453	0.168 1548	9.917 6765	143	30	
	40	9.749 5528	310	9.831 8905	453	0.168 1095	9.917 6622	143	20	
	50	9.749 5838	310	9.831 9358	453	0.168 0642	9.917 6479	143	10	
11	0	9.749 6148	310	9.831 9811	453	0.168 0189	9.917 6336	143	0	49
	10	9.749 6458	310	9.832 0264	453	0.167 9736	9.917 6193	143	50	
	20	9.749 6768	310	9.832 0717	453	0.167 9283	9.917 6050	143	40	
	30	9.749 7078	310	9.832 1170	453	0.167 8830	9.917 5907	143	30	
	40	9.749 7388	310	9.832 1623	453	0.167 8377	9.917 5764	143	20	
	50	9.749 7698	309	9.832 2076	453	0.167 7924	9.917 5621	143	10	
12	0	9.749 8007	310	9.832 2529	453	0.167 7471	9.917 5478	143	0	48
	10	9.749 8317	310	9.832 2982	453	0.167 7018	9.917 5335	143	50	
	20	9.749 8627	310	9.832 3435	453	0.167 6565	9.917 5192	143	40	
	30	9.749 8937	309	9.832 3888	453	0.167 6112	9.917 5049	143	30	
	40	9.749 9246	310	9.832 4341	453	0.167 5659	9.917 4906	143	20	
	50	9.749 9556	310	9.832 4794	452	0.167 5206	9.917 4763	144	10	
13	0	9.749 9866	309	9.832 5246	453	0.167 4754	9.917 4619	143	0	47
	10	9.750 0175	310	9.832 5699	453	0.167 4301	9.917 4476	143	50	
	20	9.750 0485	309	9.832 6152	453	0.167 3848	9.917 4333	143	40	
	30	9.750 0794	310	9.832 6605	452	0.167 3395	9.917 4190	143	30	
	40	9.750 1104	309	9.832 7057	453	0.167 2943	9.917 4047	144	20	
	50	9.750 1413	310	9.832 7510	453	0.167 2490	9.917 3903	143	10	
14	0	9.750 1723	309	9.832 7963	453	0.167 2037	9.917 3760	143	0	46
	10	9.750 2032	310	9.832 8416	452	0.167 1584	9.917 3617	144	50	
	20	9.750 2342	309	9.832 8868	453	0.167 1132	9.917 3473	143	40	
	30	9.750 2651	309	9.832 9321	453	0.167 0679	9.917 3330	143	30	
	40	9.750 2960	310	9.832 9774	452	0.167 0226	9.917 3187	143	20	
	50	9.750 3270	309	9.833 0226	453	0.166 9774	9.917 3044	144	10	
15	0	9.750 3579	309	9.833 0679	452	0.166 9321	9.917 2900	143	0	45
	10	9.750 3888	309	9.833 1131	453	0.166 8869	9.917 2757	144	50	
	20	9.750 4197	309	9.833 1584	452	0.166 8416	9.917 2613	143	40	
	30	9.750 4506	310	9.833 2036	453	0.166 7964	9.917 2470	143	30	
	40	9.750 4816	309	9.833 2489	453	0.166 7511	9.917 2327	144	20	
	50	9.750 5125	309	9.833 2942	452	0.166 7058	9.917 2183	143	10	
16	0	9.750 5434	309	9.833 3394	453	0.166 6606	9.917 2040	144	0	44
	10	9.750 5743	309	9.833 3847	452	0.166 6153	9.917 1896	143	50	
	20	9.750 6052	309	9.833 4299	452	0.166 5701	9.917 1753	144	40	
	30	9.750 6361	309	9.833 4751	453	0.166 5249	9.917 1609	143	30	
	40	9.750 6670	309	9.833 5204	452	0.166 4796	9.917 1466	144	20	
	50	9.750 6979	308	9.833 5656	453	0.166 4344	9.917 1322	143	10	
17	0	9.750 7287	309	9.833 6109	452	0.166 3891	9.917 1179	144	0	43
	10	9.750 7596	309	9.833 6561	452	0.166 3439	9.917 1035	143	50	
	20	9.750 7905	309	9.833 7013	453	0.166 2987	9.917 0892	144	40	
	30	9.750 8214	309	9.833 7466	452	0.166 2534	9.917 0748	144	30	
	40	9.750 8523	308	9.833 7918	452	0.166 2082	9.917 0604	143	20	
	50	9.750 8831	309	9.833 8370	453	0.166 1630	9.917 0461	144	10	
18	0	9.750 9140	309	9.833 8823	452	0.166 1177	9.917 0317	143	0	42
	10	9.750 9449	308	9.833 9275	452	0.166 0725	9.917 0174	144	50	
	20	9.750 9757	309	9.833 9727	452	0.166 0273	9.917 0030	144	40	
	30	9.751 0066	308	9.834 0179	453	0.165 9821	9.916 9886	143	30	
	40	9.751 0374	309	9.834 0632	452	0.165 9368	9.916 9743	144	20	
	50	9.751 0683	308	9.834 1084	452	0.165 8916	9.916 9599	144	10	
19	0	9.751 0991	309	9.834 1536	452	0.165 8464	9.916 9455	144	0	41
	10	9.751 1300	308	9.834 1988	452	0.165 8012	9.916 9311	143	50	
	20	9.751 1608	309	9.834 2440	453	0.165 7560	9.916 9168	144	40	
	30	9.751 1917	308	9.834 2893	452	0.165 7107	9.916 9024	144	30	
	40	9.751 2225	308	9.834 3345	452	0.165 6655	9.916 8880	144	20	
	50	9.751 2533	309	9.834 3797	452	0.165 6203	9.916 8736	143	10	
20	0	9.751 2842		9.834 4249		0.165 5751	9.916 8593		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

55°

453	
1	45.3
2	90.6
3	135.9
4	181.2
5	226.5
6	271.8
7	317.1
8	362.4
9	407.7

452	
1	45.2
2	90.4
3	135.6
4	180.8
5	226.0
6	271.2
7	316.4
8	361.6
9	406.8

309	
1	30.9
2	61.8
3	92.7
4	123.6
5	154.5
6	185.4
7	216.3
8	247.2
9	278.1

308	
1	30.8
2	61.6
3	92.4
4	123.2
5	154.0
6	184.8
7	215.6
8	246.4
9	277.2

143	
1	14.3
2	28.6
3	42.9
4	57.2
5	71.5
6	85.8
7	100.1
8	114.4
9	128.7

144	
1	14.4
2	28.8
3	43.2
4	57.6
5	72.0
6	86.4
7	100.8
8	115.2
9	129.6

34°

	452
1	45.2
2	90.4
3	135.6
4	180.8
5	226.0
6	271.2
7	316.4
8	361.6
9	406.8

	451
1	45.1
2	90.2
3	135.3
4	180.4
5	225.5
6	270.6
7	315.7
8	360.8
9	405.9

	309
1	30.9
2	61.8
3	92.7
4	123.6
5	154.5
6	185.4
7	216.3
8	247.2
9	278.1

	308
1	30.8
2	61.6
3	92.4
4	123.2
5	154.0
6	184.8
7	215.6
8	246.4
9	277.2

	307
1	30.7
2	61.4
3	92.1
4	122.8
5	153.5
6	184.2
7	214.9
8	245.6
9	276.3

	144
1	14.4
2	28.8
3	43.2
4	57.6
5	72.0
6	86.4
7	100.8
8	115.2
9	129.6

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.751 2842	308	9.834 4249	452	0.165 5751	9.916 8593	144	0	40
	10	9.751 3150	308	9.834 4701	452	0.165 5299	9.916 8449	144	50	
	20	9.751 3458	308	9.834 5153	452	0.165 4847	9.916 8305	144	40	
	30	9.751 3766	308	9.834 5605	452	0.165 4395	9.916 8161	144	30	
	40	9.751 4074	308	9.834 6057	452	0.165 3943	9.916 8017	144	20	
	50	9.751 4382	309	9.834 6509	452	0.165 3491	9.916 7873	143	10	
21	0	9.751 4691	308	9.834 6961	452	0.165 3039	9.916 7730	144	0	39
	10	9.751 4999	308	9.834 7413	452	0.165 2587	9.916 7586	144	50	
	20	9.751 5307	308	9.834 7865	452	0.165 2135	9.916 7442	144	40	
	30	9.751 5615	308	9.834 8317	452	0.165 1683	9.916 7298	144	30	
	40	9.751 5923	308	9.834 8769	452	0.165 1231	9.916 7154	144	20	
	50	9.751 6231	307	9.834 9221	452	0.165 0779	9.916 7010	144	10	
22	0	9.751 6538	308	9.834 9673	452	0.165 0327	9.916 6866	144	0	38
	10	9.751 6846	308	9.835 0125	451	0.164 9875	9.916 6722	144	50	
	20	9.751 7154	308	9.835 0576	452	0.164 9424	9.916 6578	144	40	
	30	9.751 7462	308	9.835 1028	452	0.164 8972	9.916 6434	144	30	
	40	9.751 7770	308	9.835 1480	452	0.164 8520	9.916 6290	144	20	
	50	9.751 8078	307	9.835 1932	452	0.164 8068	9.916 6146	144	10	
23	0	9.751 8385	308	9.835 2384	451	0.164 7616	9.916 6002	144	0	37
	10	9.751 8693	308	9.835 2835	452	0.164 7165	9.916 5858	145	50	
	20	9.751 9001	307	9.835 3287	452	0.164 6713	9.916 5713	144	40	
	30	9.751 9308	308	9.835 3739	452	0 164 6261	9.916 5569	144	30	
	40	9.751 9616	307	9.835 4191	451	0.164 5809	9.916 5425	144	20	
	50	9.751 9923	308	9.835 4642	452	0.164 5358	9.916 5281	144	10	
24	0	9.752 0231	307	9.835 5094	452	0.164 4906	9.916 5137	144	0	36
	10	9.752 0538	308	9.835 5546	451	0.164 4454	9.916 4993	144	50	
	20	9.752 0846	307	9.835 5997	452	0.164 4003	9.916 4849	145	40	
	30	9.752 1153	308	9.835 6449	451	0.164 3551	9.916 4704	144	30	
	40	9.752 1461	307	9.835 6900	452	0.164 3100	9.916 4560	144	20	
	50	9.752 1768	307	9.835 7352	452	0.164 2648	9.916 4416	144	10	
25	0	9.752 2075	308	9.835 7804	451	0.164 2196	9.916 4272	145	0	35
	10	9.752 2383	307	9.835 8255	452	0.164 1745	9.916 4127	144	50	
	20	9.752 2690	307	9.835 8707	451	0.164 1293	9.916 3983	144	40	
	30	9.752 2997	307	9.835 9158	452	0.164 0842	9.916 3839	145	30	
	40	9.752 3304	307	9.835 9610	451	0.164 0390	9.916 3694	144	20	
	50	9.752 3611	308	9.836 0061	452	0.163 9939	9.916 3550	144	10	
26	0	9.752 3919	307	9.836 0513	451	0.163 9487	9.916 3406	145	0	34
	10	9.752 4226	307	9.836 0964	452	0.163 9036	9.916 3261	144	50	
	20	9.752 4533	307	9.836 1416	451	0.163 8584	9.916 3117	144	40	
	30	9.752 4840	307	9.836 1867	451	0.163 8133	9.916 2973	145	30	
	40	9.752 5147	307	9.836 2318	452	0.163 7682	9.916 2828	144	20	
	50	9.752 5454	307	9.836 2770	451	0.163 7230	9.916 2684	145	10	
27	0	9.752 5761	307	9.836 3221	452	0.163 6779	9.916 2539	144	0	33
	10	9.752 6068	307	9.836 3673	451	0.163 6327	9.916 2395	144	50	
	20	9.752 6375	306	9.836 4124	451	0.163 5876	9.916 2251	145	40	
	30	9.752 6681	307	9.836 4575	452	0.163 5425	9.916 2106	144	30	
	40	9.752 6988	307	9.836 5027	451	0.163 4973	9.916 1962	145	20	
	50	9.752 7295	307	9.836 5478	451	0.163 4522	9.916 1817	144	10	
28	0	9.752 7602	306	9.836 5929	451	0.163 4071	9.916 1673	145	0	32
	10	9.752 7908	307	9.836 6380	452	0.163 3620	9.916 1528	145	50	
	20	9.752 8215	307	9.836 6832	451	0.163 3168	9.916 1383	144	40	
	30	9.752 8522	306	9.836 7283	451	0.163 2717	9.916 1239	145	30	
	40	9.752 8828	307	9.836 7734	451	0.163 2266	9.916 1094	144	20	
	50	9.752 9135	307	9.836 8185	451	0.163 1815	9.916 0950	145	10	
29	0	9.752 9442	306	9.836 8636	452	0.163 1364	9.916 0805	144	0	31
	10	9.752 9748	307	9.836 9088	451	0.163 0912	9.916 0661	145	50	
	20	9.753 0055	306	9.836 9539	451	0.163 0461	9.916 0516	145	40	
	30	9.753 0361	306	9.836 9990	451	0.163 0010	9.916 0371	144	30	
	40	9.753 0667	307	9.837 0441	451	0.162 9559	9.916 0227	145	20	
	50	9.753 0974	306	9.837 0892	451	0.162 9108	9.916 0082	145	10	
30	0	9.753 1280		9.837 1343		0.162 8657	9.915 9937		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

55°

34°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.753 1280	307	9.837 1343	451	0.162 8657	9.915 9937	145	0	30
	10	9.753 1587	306	9.837 1794	451	0.162 8206	9.915 9792	144	50	
	20	9.753 1893	306	9.837 2245	451	0.162 7755	9.915 9648	145	40	
	30	9.753 2199	306	9.837 2696	451	0.162 7304	9.915 9503	145	30	
	40	9.753 2505	307	9.837 3147	451	0.162 6853	9.915 9358	145	20	
	50	9.753 2812	306	9.837 3598	451	0.162 6402	9.915 9213	144	10	
31	0	9.753 3118	306	9.837 4049	451	0.162 5951	9.915 9069	145	0	29
	10	9.753 3424	306	9.837 4500	451	0.162 5500	9.915 8924	145	50	
	20	9.753 3730	306	9.837 4951	451	0.162 5049	9.915 8779	145	40	
	30	9.753 4036	306	9.837 5402	451	0.162 4598	9.915 8634	145	30	
	40	9.753 4342	306	9.837 5853	451	0.162 4147	9.915 8489	145	20	
	50	9.753 4648	306	9.837 6304	451	0.162 3696	9.915 8344	144	10	
32	0	9.753 4954	306	9.837 6755	451	0.162 3245	9.915 8200	145	0	28
	10	9.753 5260	306	9.837 7206	450	0.162 2794	9.915 8055	145	50	
	20	9.753 5566	306	9.837 7656	451	0.162 2344	9.915 7910	145	40	
	30	9.753 5872	306	9.837 8107	451	0.162 1893	9.915 7765	145	30	
	40	9.753 6178	306	9.837 8558	451	0.162 1442	9.915 7620	145	20	
	50	9.753 6484	306	9.837 9009	451	0.162 0991	9.915 7475	145	10	
33	0	9.753 6790	305	9.837 9460	450	0.162 0540	9.915 7330	145	0	27
	10	9.753 7095	306	9.837 9910	451	0.162 0090	9.915 7185	145	50	
	20	9.753 7401	306	9.838 0361	451	0.161 9639	9.915 7040	145	40	
	30	9.753 7707	305	9.838 0812	450	0.161 9188	9.915 6895	145	30	
	40	9.753 8012	306	9.838 1262	451	0.161 8738	9.915 6750	145	20	
	50	9.753 8318	306	9.838 1713	451	0.161 8287	9.915 6605	145	10	
34	0	9.753 8624	305	9.838 2164	450	0.161 7836	9.915 6460	145	0	26
	10	9.753 8929	306	9.838 2614	451	0.161 7386	9.915 6315	145	50	
	20	9.753 9235	305	9.838 3065	451	0.161 6935	9.915 6170	145	40	
	30	9.753 9540	306	9.838 3516	450	0.161 6484	9.915 6025	146	30	
	40	9.753 9846	305	9.838 3966	451	0.161 6034	9.915 5879	145	20	
	50	9.754 0151	306	9.838 4417	450	0.161 5583	9.915 5734	145	10	
35	0	9.754 0457	305	9.838 4867	451	0.161 5133	9.915 5589	145	0	25
	10	9.754 0762	305	9.838 5318	451	0.161 4682	9.915 5444	145	50	
	20	9.754 1067	306	9.838 5769	450	0.161 4231	9.915 5299	145	40	
	30	9.754 1373	305	9.838 6219	451	0.161 3781	9.915 5154	146	30	
	40	9.754 1678	305	9.838 6670	450	0.161 3330	9.915 5008	145	20	
	50	9.754 1983	305	9.838 7120	451	0.161 2880	9.915 4863	145	10	
36	0	9.754 2288	306	9.838 7571	450	0.161 2429	9.915 4718	145	0	24
	10	9.754 2594	305	9.838 8021	450	0.161 1979	9.915 4573	146	50	
	20	9.754 2899	305	9.838 8471	451	0.161 1529	9.915 4427	145	40	
	30	9.754 3204	305	9.838 8922	450	0.161 1078	9.915 4282	145	30	
	40	9.754 3509	305	9.838 9372	451	0.161 0628	9.915 4137	146	20	
	50	9.754 3814	305	9.838 9823	450	0.161 0177	9.915 3991	145	10	
37	0	9.754 4119	305	9.839 0273	450	0.160 9727	9.915 3846	145	0	23
	10	9.754 4424	305	9.839 0723	451	0.160 9277	9.915 3701	146	50	
	20	9.754 4729	305	9.839 1174	450	0.160 8826	9.915 3555	145	40	
	30	9.754 5034	305	9.839 1624	450	0.160 8376	9.915 3410	145	30	
	40	9.754 5339	305	9.839 2074	451	0.160 7926	9.915 3265	146	20	
	50	9.754 5644	305	9.839 2525	450	0.160 7475	9.915 3119	145	10	
38	0	9.754 5949	305	9.839 2975	450	0.160 7025	9.915 2974	146	0	22
	10	9.754 6254	304	9.839 3425	450	0.160 6575	9.915 2828	145	50	
	20	9.754 6558	305	9.839 3875	451	0.160 6125	9.915 2683	146	40	
	30	9.754 6863	305	9.839 4326	450	0.160 5674	9.915 2537	145	30	
	40	9.754 7168	305	9.839 4776	450	0.160 5224	9.915 2392	146	20	
	50	9.754 7473	304	9.839 5226	450	0.160 4774	9.915 2246	145	10	
39	0	9.754 7777	305	9.839 5676	450	0.160 4324	9.915 2101	146	0	21
	10	9.754 8082	304	9.839 6126	450	0.160 3874	9.915 1955	145	50	
	20	9.754 8386	305	9.839 6576	451	0.160 3424	9.915 1810	146	40	
	30	9.754 8691	304	9.839 7027	450	0.160 2973	9.915 1664	145	30	
	40	9.754 8995	305	9.839 7477	450	0.160 2523	9.915 1519	146	20	
	50	9.754 9300	304	9.839 7927	450	0.160 2073	9.915 1373	145	10	
40	0	9.754 9604		9.839 8377		0.160 1623	9.915 1228		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

55°

	450
1	45.0
2	90.0
3	135.0
4	180.0
5	225.0
6	270.0
7	315.0
8	360.0
9	405.0

	306
1	30.6
2	61.2
3	91.8
4	122.4
5	153.0
6	183.6
7	214.2
8	244.8
9	275.4

	305
1	30.5
2	61.0
3	91.5
4	122.0
5	152.5
6	183.0
7	213.5
8	244.0
9	274.5

	304
1	30.4
2	60.8
3	91.2
4	121.6
5	152.0
6	182.4
7	212.8
8	243.2
9	273.6

	145
1	14.5
2	29.0
3	43.5
4	58.0
5	72.5
6	87.0
7	101.5
8	116.0
9	130.5

	146
1	14.6
2	29.2
3	43.8
4	58.4
5	73.0
6	87.6
7	102.2
8	116.8
9	131.4

34°

	450	449	305	304	145	146
1	45.0	44.9	30.5	30.4	14.5	14.6
2	90.0	89.8	61.0	60.8	29.0	29.2
3	135.0	134.7	91.5	91.2	43.5	43.8
4	180.0	179.6	122.0	121.6	58.0	58.4
5	225.0	224.5	152.5	152.0	72.5	73.0
6	270.0	269.4	183.0	182.4	87.0	87.6
7	315.0	314.3	213.5	212.8	101.5	102.2
8	360.0	359.2	244.0	243.2	116.0	116.8
9	405.0	404.1	274.5	273.6	130.5	131.4

'	"	Sin.	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.754 9604	305	9.839 8377	450	0.160 1623	9.915 1228	146	0	20
	10	9.754 9909	304	9.839 8827	450	0.160 1173	9.915 1082	146	50	
	20	9.755 0213	305	9.839 9277	450	0.160 0723	9.915 0936	145	40	
	30	9.755 0518	304	9.839 9727	450	0.160 0273	9.915 0791	146	30	
	40	9.755 0822	304	9.840 0177	450	0.159 9823	9.915 0645	146	20	
	50	9.755 1126	305	9.840 0627	450	0.159 9373	9.915 0499	145	10	
41	0	9.755 1431	304	9.840 1077	450	0.159 8923	9.915 0354	146	0	19
	10	9.755 1735	304	9.840 1527	450	0.159 8473	9.915 0208	146	50	
	20	9.755 2039	304	9.840 1977	450	0.159 8023	9.915 0062	146	40	
	30	9.755 2343	304	9.840 2427	450	0.159 7573	9.914 9916	145	30	
	40	9.755 2647	305	9.840 2877	450	0.159 7123	9.914 9771	146	20	
	50	9.755 2952	304	9.840 3327	449	0.159 6673	9.914 9625	146	10	
42	0	9.755 3256	304	9.840 3776	450	0.159 6224	9.914 9479	146	0	18
	10	9.755 3560	304	9.840 4226	450	0.159 5774	9.914 9333	145	50	
	20	9.755 3864	304	9.840 4676	450	0.159 5324	9.914 9188	146	40	
	30	9.755 4168	304	9.840 5126	450	0.159 4874	9.914 9042	146	30	
	40	9.755 4472	304	9.840 5576	450	0.159 4424	9.914 8896	146	20	
	50	9.755 4776	304	9.840 6026	449	0.159 3974	9.914 8750	146	10	
43	0	9.755 5080	303	9.840 6475	450	0.159 3525	9.914 8604	146	0	17
	10	9.755 5383	304	9.840 6925	450	0.159 3075	9.914 8458	146	50	
	20	9.755 5687	304	9.840 7375	450	0.159 2625	9.914 8312	146	40	
	30	9.755 5991	304	9.840 7825	449	0.159 2175	9.914 8166	146	30	
	40	9.755 6295	304	9.840 8274	450	0.159 1726	9.914 8020	146	20	
	50	9.755 6599	303	9.840 8724	450	0.159 1276	9.914 7874	145	10	
44	0	9.755 6902	304	9.840 9174	449	0.159 0826	9.914 7729	146	0	16
	10	9.755 7206	304	9.840 9623	450	0.159 0377	9.914 7583	146	50	
	20	9.755 7510	303	9.841 0073	450	0.158 9927	9.914 7437	146	40	
	30	9.755 7813	304	9.841 0523	449	0.158 9477	9.914 7291	146	30	
	40	9.755 8117	303	9.841 0972	450	0.158 9028	9.914 7145	147	20	
	50	9.755 8420	304	9.841 1422	449	0.158 8578	9.914 6998	146	10	
45	0	9.755 8724	303	9.841 1871	450	0.158 8129	9.914 6852	146	0	15
	10	9.755 9027	304	9.841 2321	450	0.158 7679	9.914 6706	146	50	
	20	9.755 9331	303	9.841 2771	449	0.158 7229	9.914 6560	146	40	
	30	9.755 9634	304	9.841 3220	450	0.158 6780	9.914 6414	146	30	
	40	9.755 9938	303	9.841 3670	449	0.158 6330	9.914 6268	146	20	
	50	9.756 0241	303	9.841 4119	450	0.158 5881	9.914 6122	146	10	
46	0	9.756 0544	304	9.841 4569	449	0.158 5431	9.914 5976	146	0	14
	10	9.756 0848	303	9.841 5018	450	0.158 4982	9.914 5830	147	50	
	20	9.756 1151	303	9.841 5468	449	0.158 4532	9.914 5683	146	40	
	30	9.756 1454	303	9.841 5917	449	0.158 4083	9.914 5537	146	30	
	40	9.756 1757	304	9.841 6366	450	0.158 3634	9.914 5391	146	20	
	50	9.756 2061	303	9.841 6816	449	0.158 3184	9.914 5245	146	10	
47	0	9.756 2364	303	9.841 7265	450	0.158 2735	9.914 5099	147	0	13
	10	9.756 2667	303	9.841 7715	449	0.158 2285	9.914 4952	146	50	
	20	9.756 2970	303	9.841 8164	449	0.158 1836	9.914 4806	146	40	
	30	9.756 3273	303	9.841 8613	450	0.158 1387	9.914 4660	147	30	
	40	9.756 3576	303	9.841 9063	449	0.158 0937	9.914 4513	146	20	
	50	9.756 3879	303	9.841 9512	449	0.158 0488	9.914 4367	146	10	
48	0	9.756 4182	303	9.841 9961	449	0.158 0039	9.914 4221	147	0	12
	10	9.756 4485	303	9.842 0410	450	0.157 9590	9.914 4074	146	50	
	20	9.756 4788	303	9.842 0860	449	0.157 9140	9.914 3928	146	40	
	30	9.756 5091	302	9.842 1309	449	0.157 8691	9.914 3782	147	30	
	40	9.756 5393	303	9.842 1758	449	0.157 8242	9.914 3635	146	20	
	50	9.756 5696	303	9.842 2207	450	0.157 7793	9.914 3489	147	10	
49	0	9.756 5999	303	9.842 2657	449	0.157 7343	9.914 3342	146	0	11
	10	9.756 6302	303	9.842 3106	449	0.157 6894	9.914 3196	146	50	
	20	9.756 6605	302	9.842 3555	449	0.157 6445	9.914 3050	147	40	
	30	9.756 6907	303	9.842 4004	449	0.157 5996	9.914 2903	146	30	
	40	9.756 7210	302	9.842 4453	449	0.157 5547	9.914 2757	147	20	
	50	9.756 7512	303	9.842 4902	449	0.157 5098	9.914 2610	146	10	
50	0	9.756 7815		9.842 5351		0.157 4649	9.914 2464		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

55°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.756 7815	303	9.842 5351	449	0.157 4649	9.914 2464	147	0	10
	10	9.756 8118	302	9.842 5800	450	0.157 4200	9.914 2317	146	50	
	20	9.756 8420	303	9.842 6250	449	0.157 3750	9.914 2171	147	40	
	30	9.756 8723	302	9.842 6699	449	0.157 3301	9.914 2024	147	30	
	40	9.756 9025	303	9.842 7148	449	0.157 2852	9.914 1877	146	20	
	50	9.756 9328	302	9.842 7597	449	0.157 2403	9.914 1731	147	10	
51	0	9.756 9630	302	9.842 8046	449	0.157 1954	9.914 1584	146	0	9
	10	9.756 9932	303	9.842 8495	449	0.157 1505	9.914 1438	147	50	
	20	9.757 0235	302	9.842 8944	449	0.157 1056	9.914 1291	147	40	
	30	9.757 0537	302	9.842 9393	448	0.157 0607	9.914 1144	146	30	
	40	9.757 0839	302	9.842 9841	449	0.157 0159	9.914 0998	147	20	
	50	9.757 1141	303	9.843 0290	449	0.156 9710	9.914 0851	147	10	
52	0	9.757 1444	302	9.843 0739	449	0.156 9261	9.914 0704	146	0	8
	10	9.757 1746	302	9.843 1188	449	0.156 8812	9.914 0558	147	50	
	20	9.757 2048	302	9.843 1637	449	0.156 8363	9.914 0411	147	40	
	30	9.757 2350	302	9.843 2086	449	0.156 7914	9.914 0264	147	30	
	40	9.757 2652	302	9.843 2535	449	0.156 7465	9.914 0117	146	20	
	50	9.757 2954	302	9.843 2984	448	0.156 7016	9.913 9971	147	10	
53	0	9.757 3256	302	9.843 3432	449	0.156 6568	9.913 9824	147	0	7
	10	9.757 3558	302	9.843 3881	449	0.156 6119	9.913 9677	147	50	
	20	9.757 3860	302	9.843 4330	449	0.156 5670	9.913 9530	147	40	
	30	9.757 4162	302	9.843 4779	448	0.156 5221	9.913 9383	146	30	
	40	9.757 4464	302	9.843 5227	449	0.156 4773	9.913 9237	147	20	
	50	9.757 4766	302	9.843 5676	449	0.156 4324	9.913 9090	147	10	
54	0	9.757 5068	302	9.843 6125	449	0.156 3875	9.913 8943	147	0	6
	10	9.757 5370	301	9.843 6574	448	0.156 3426	9.913 8796	147	50	
	20	9.757 5671	302	9.843 7022	449	0.156 2978	9.913 8649	147	40	
	30	9.757 5973	302	9.843 7471	449	0.156 2529	9.913 8502	147	30	
	40	9.757 6275	301	9.843 7920	448	0.156 2080	9.913 8355	147	20	
	50	9.757 6576	302	9.843 8368	449	0.156 1632	9.913 8208	147	10	
55	0	9.757 6878	302	9.843 8817	448	0.156 1183	9.913 8061	147	0	5
	10	9.757 7180	301	9.843 9265	449	0.156 0735	9.913 7914	147	50	
	20	9.757 7481	302	9.843 9714	449	0.156 0286	9.913 7767	147	40	
	30	9.757 7783	301	9.844 0163	448	0.155 9837	9.913 7620	147	30	
	40	9.757 8084	302	9.844 0611	449	0.155 9389	9.913 7473	147	20	
	50	9.757 8386	301	9.844 1060	448	0.155 8940	9.913 7326	147	10	
56	0	9.757 8687	302	9.844 1508	449	0.155 8492	9.913 7179	147	0	4
	10	9.757 8989	301	9.844 1957	448	0.155 8043	9.913 7032	147	50	
	20	9.757 9290	301	9.844 2405	449	0.155 7595	9.913 6885	147	40	
	30	9.757 9591	302	9.844 2854	448	0.155 7146	9.913 6738	147	30	
	40	9.757 9893	301	9.844 3302	449	0.155 6698	9.913 6591	147	20	
	50	9.758 0194	301	9.844 3751	448	0.155 6249	9.913 6444	148	10	
57	0	9.758 0495	302	9.844 4199	448	0.155 5801	9.913 6296	147	0	3
	10	9.758 0797	301	9.844 4647	449	0.155 5353	9.913 6149	147	50	
	20	9.758 1098	301	9.844 5096	448	0.155 4904	9.913 6002	147	40	
	30	9.758 1399	301	9.844 5544	448	0.155 4456	9.913 5855	147	30	
	40	9.758 1700	301	9.844 5992	449	0.155 4008	9.913 5708	148	20	
	50	9.758 2001	301	9.844 6441	448	0.155 3559	9.913 5560	147	10	
58	0	9.758 2302	301	9.844 6889	448	0.155 3111	9.913 5413	147	0	2
	10	9.758 2603	301	9.844 7337	449	0.155 2663	9.913 5266	147	50	
	20	9.758 2904	301	9.844 7786	448	0.155 2214	9.913 5119	148	40	
	30	9.758 3205	301	9.844 8234	448	0.155 1766	9.913 4971	147	30	
	40	9.758 3506	301	9.844 8682	449	0.155 1318	9.913 4824	147	20	
	50	9.758 3807	301	9.844 9131	448	0.155 0869	9.913 4677	147	10	
59	0	9.758 4108	301	9.844 9579	448	0.155 0421	9.913 4530	148	0	1
	10	9.758 4409	301	9.845 0027	448	0.154 9973	9.913 4382	147	50	
	20	9.758 4710	301	9.845 0475	448	0.154 9525	9.913 4235	148	40	
	30	9.758 5011	301	9.845 0923	449	0.154 9077	9.913 4087	147	30	
	40	9.758 5312	300	9.845 1372	448	0.154 8628	9.913 3940	147	20	
	50	9.758 5612	301	9.845 1820	448	0.154 8180	9.913 3793	148	10	
60	0	9.758 5913		9.845 2268		0.154 7732	9.913 3645		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	448
1	44.8
2	89.6
3	134.4
4	179.2
5	224.0
6	268.8
7	313.6
8	358.4
9	403.2

	303
1	30.3
2	60.6
3	90.9
4	121.2
5	151.5
6	181.8
7	212.1
8	242.4
9	272.7

	302
1	30.2
2	60.4
3	90.6
4	120.8
5	151.0
6	181.2
7	211.4
8	241.6
9	271.8

	301
1	30.1
2	60.2
3	90.3
4	120.4
5	150.5
6	180.6
7	210.7
8	240.8
9	270.9

	147
1	14.7
2	29.4
3	44.1
4	58.8
5	73.5
6	88.2
7	102.9
8	117.6
9	132.3

	148
1	14.8
2	29.6
3	44.4
4	59.2
5	74.0
6	88.8
7	103.6
8	118.4
9	133.2

35°

	448
1	44.8
2	89.6
3	134.4
4	179.2
5	224.0
6	268.8
7	313.6
8	358.4
9	403.2

	301
1	30.1
2	60.2
3	90.3
4	120.4
5	150.5
6	180.6
7	210.7
8	240.8
9	270.9

	300
1	30.0
2	60.0
3	90.0
4	120.0
5	150.0
6	180.0
7	210.0
8	240.0
9	270.0

	299
1	29.9
2	59.8
3	89.7
4	119.6
5	149.5
6	179.4
7	209.3
8	239.2
9	269.1

	147
1	14.7
2	29.4
3	44.1
4	58.8
5	73.5
6	88.2
7	102.9
8	117.6
9	132.3

	148
1	14.8
2	29.6
3	44.4
4	59.2
5	74.0
6	88.8
7	103.6
8	118.4
9	133.2

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.758 5913	301	9.845 2268	448	0.154 7732	9.913 3645	147	0	60
	10	9.758 6214	300	9.845 2716	448	0.154 7284	9.913 3498	148	50	
	20	9.758 6514	301	9.845 3164	448	0.154 6836	9.913 3350	147	40	
	30	9.758 6815	301	9.845 3612	448	0.154 6388	9.913 3203	148	30	
	40	9.758 7116	300	9.845 4060	448	0.154 5940	9.913 3055	147	20	
	50	9.758 7416	301	9.845 4508	448	0.154 5492	9.913 2908	148	10	
1	0	9.758 7717	300	9.845 4956	448	0.154 5044	9.913 2760	147	0	59
	10	9.758 8017	301	9.845 5404	448	0.154 4596	9.913 2613	148	50	
	20	9.758 8318	300	9.845 5852	448	0.154 4148	9.913 2465	147	40	
	30	9.758 8618	300	9.845 6300	448	0.154 3700	9.913 2318	148	30	
	40	9.758 8918	301	9.845 6748	448	0.154 3252	9.913 2170	147	20	
	50	9.758 9219	300	9.845 7196	448	0.154 2804	9.913 2023	148	10	
2	0	9.758 9519	300	9.845 7644	448	0.154 2356	9.913 1875	148	0	58
	10	9.758 9819	301	9.845 8092	448	0.154 1908	9.913 1727	147	50	
	20	9.759 0120	300	9.845 8540	448	0.154 1460	9.913 1580	148	40	
	30	9.759 0420	300	9.845 8988	448	0.154 1012	9.913 1432	148	30	
	40	9.759 0720	300	9.845 9436	448	0.154 0564	9.913 1284	147	20	
	50	9.759 1020	301	9.845 9884	448	0.154 0116	9.913 1137	148	10	
3	0	9.759 1321	300	9.846 0332	447	0.153 9668	9.913 0989	148	0	57
	10	9.759 1621	300	9.846 0779	448	0.153 9221	9.913 0841	147	50	
	20	9.759 1921	300	9.846 1227	448	0.153 8773	9.913 0694	148	40	
	30	9.759 2221	300	9.846 1675	448	0.153 8325	9.913 0546	148	30	
	40	9.759 2521	300	9.846 2123	448	0.153 7877	9.913 0398	148	20	
	50	9.759 2821	300	9.846 2571	447	0.153 7429	9.913 0250	148	10	
4	0	9.759 3121	300	9.846 3018	448	0.153 6982	9.913 0102	147	0	56
	10	9.759 3421	300	9.846 3466	448	0.153 6534	9.912 9955	148	50	
	20	9.759 3721	300	9.846 3914	448	0.153 6086	9.912 9807	148	40	
	30	9.759 4021	299	9.846 4362	447	0.153 5638	9.912 9659	148	30	
	40	9.759 4320	300	9.846 4809	448	0.153 5191	9.912 9511	148	20	
	50	9.759 4620	300	9.846 5257	448	0.153 4743	9.912 9363	148	10	
5	0	9.759 4920	300	9.846 5705	447	0.153 4295	9.912 9215	147	0	55
	10	9.759 5220	300	9.846 6152	448	0.153 3848	9.912 9068	148	50	
	20	9.759 5520	299	9.846 6600	448	0.153 3400	9.912 8920	148	40	
	30	9.759 5819	300	9.846 7048	447	0.153 2952	9.912 8772	148	30	
	40	9.759 6119	300	9.846 7495	448	0.153 2505	9.912 8624	148	20	
	50	9.759 6419	299	9.846 7943	447	0.153 2057	9.912 8476	148	10	
6	0	9.759 6718	300	9.846 8390	448	0.153 1610	9.912 8328	148	0	54
	10	9.759 7018	299	9.846 8838	447	0.153 1162	9.912 8180	148	50	
	20	9.759 7317	300	9.846 9285	448	0.153 0715	9.912 8032	148	40	
	30	9.759 7617	299	9.846 9733	447	0.153 0267	9.912 7884	148	30	
	40	9.759 7916	300	9.847 0180	448	0.152 9820	9.912 7736	148	20	
	50	9.759 8216	299	9.847 0628	447	0.152 9372	9.912 7588	148	10	
7	0	9.759 8515	299	9.847 1075	448	0.152 8925	9.912 7440	148	0	53
	10	9.759 8814	300	9.847 1523	447	0.152 8477	9.912 7292	148	50	
	20	9.759 9114	299	9.847 1970	448	0.152 8030	9.912 7144	149	40	
	30	9.759 9413	299	9.847 2418	447	0.152 7582	9.912 6995	148	30	
	40	9.759 9712	300	9.847 2865	448	0.152 7135	9.912 6847	148	20	
	50	9.760 0012	299	9.847 3313	447	0.152 6687	9.912 6699	148	10	
8	0	9.760 0311	299	9.847 3760	447	0.152 6240	9.912 6551	148	0	52
	10	9.760 0610	299	9.847 4207	448	0.152 5793	9.912 6403	148	50	
	20	9.760 0909	299	9.847 4655	447	0.152 5345	9.912 6255	149	40	
	30	9.760 1208	300	9.847 5102	447	0.152 4898	9.912 6106	148	30	
	40	9.760 1508	299	9.847 5549	448	0.152 4451	9.912 5958	148	20	
	50	9.760 1807	299	9.847 5997	447	0.152 4003	9.912 5810	148	10	
9	0	9.760 2106	299	9.847 6444	447	0.152 3556	9.912 5662	148	0	51
	10	9.760 2405	299	9.847 6891	447	0.152 3109	9.912 5514	149	50	
	20	9.760 2704	299	9.847 7338	448	0.152 2662	9.912 5365	148	40	
	30	9.760 3003	299	9.847 7786	447	0.152 2214	9.912 5217	148	30	
	40	9.760 3302	298	9.847 8233	447	0.152 1767	9.912 5069	149	20	
	50	9.760 3600	299	9.847 8680	447	0.152 1320	9.912 4920	148	10	
10	0	9.760 3899		9.847 9127		0.152 0873	9.912 4772		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

54°

35°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.760 3899	299	9.847 9127	447	0.152 0873	9.912 4772	148	0	50
	10	9.760 4198	299	9.847 9574	448	0.152 0426	9.912 4624	149	50	
	20	9.760 4497	299	9.848 0022	447	0.151 9978	9.912 4475	148	40	
	30	9.760 4796	298	9.848 0469	447	0.151 9531	9.912 4327	149	30	
	40	9.760 5094	299	9.848 0916	447	0.151 9084	9.912 4178	148	20	
	50	9.760 5393	299	9.848 1363	447	0.151 8637	9.912 4030	148	10	
11	0	9.760 5692	298	9.848 1810	447	0.151 8190	9.912 3882	149	0	49
	10	9.760 5990	299	9.848 2257	447	0.151 7743	9.912 3733	148	50	
	20	9.760 6289	299	9.848 2704	447	0.151 7296	9.912 3585	149	40	
	30	9.760 6588	298	9.848 3151	447	0.151 6849	9.912 3436	148	30	
	40	9.760 6886	299	9.848 3598	447	0.151 6402	9.912 3288	149	20	
	50	9.760 7185	298	9.848 4045	447	0.151 5955	9.912 3139	148	10	
12	0	9.760 7483	299	9.848 4492	447	0.151 5508	9.912 2991	149	0	48
	10	9.760 7782	298	9.848 4939	447	0.151 5061	9.912 2842	148	50	
	20	9.760 8080	298	9.848 5386	447	0.151 4614	9.912 2694	149	40	
	30	9.760 8378	299	9.848 5833	447	0.151 4167	9.912 2545	148	30	
	40	9.760 8677	298	9.848 6280	447	0.151 3720	9.912 2397	149	20	
	50	9.760 8975	299	9.848 6727	447	0.151 3273	9.912 2248	149	10	
13	0	9.760 9274	298	9.848 7174	447	0.151 2826	9.912 2099	148	0	47
	10	9.760 9572	298	9.848 7621	447	0.151 2379	9.912 1951	149	50	
	20	9.760 9870	298	9.848 8068	447	0.151 1932	9.912 1802	149	40	
	30	9.761 0168	298	9.848 8515	447	0.151 1485	9.912 1653	148	30	
	40	9.761 0466	299	9.848 8962	447	0.151 1038	9.912 1505	149	20	
	50	9.761 0765	298	9.848 9409	446	0.151 0591	9.912 1356	149	10	
14	0	9.761 1063	298	9.848 9855	447	0.151 0145	9.912 1207	148	0	46
	10	9.761 1361	298	9.849 0302	447	0.150 9698	9.912 1059	149	50	
	20	9.761 1659	298	9.849 0749	447	0.150 9251	9.912 0910	149	40	
	30	9.761 1957	298	9.849 1196	447	0.150 8804	9.912 0761	149	30	
	40	9.761 2255	298	9.849 1643	446	0.150 8357	9.912 0612	148	20	
	50	9.761 2553	298	9.849 2089	447	0.150 7911	9.912 0464	149	10	
15	0	9.761 2851	298	9.849 2536	447	0.150 7464	9.912 0315	149	0	45
	10	9.761 3149	298	9.849 2983	446	0.150 7017	9.912 0166	149	50	
	20	9.761 3447	297	9.849 3429	447	0.150 6571	9.912 0017	149	40	
	30	9.761 3744	298	9.849 3876	447	0.150 6124	9.911 9868	149	30	
	40	9.761 4042	298	9.849 4323	446	0.150 5677	9.911 9719	148	20	
	50	9.761 4340	298	9.849 4769	447	0.150 5231	9.911 9571	149	10	
16	0	9.761 4638	298	9.849 5216	447	0.150 4784	9.911 9422	149	0	44
	10	9.761 4936	297	9.849 5663	446	0.150 4337	9.911 9273	149	50	
	20	9.761 5233	298	9.849 6109	447	0.150 3891	9.911 9124	149	40	
	30	9.761 5531	298	9.849 6556	447	0.150 3444	9.911 8975	149	30	
	40	9.761 5829	297	9.849 7003	446	0.150 2997	9.911 8826	149	20	
	50	9.761 6126	298	9.849 7449	447	0.150 2551	9.911 8677	149	10	
17	0	9.761 6424	297	9.849 7896	446	0.150 2104	9.911 8528	149	0	43
	10	9.761 6721	298	9.849 8342	447	0.150 1658	9.911 8379	149	50	
	20	9.761 7019	297	9.849 8789	446	0.150 1211	9.911 8230	149	40	
	30	9.761 7316	298	9.849 9235	447	0.150 0765	9.911 8081	149	30	
	40	9.761 7614	297	9.849 9682	446	0.150 0318	9.911 7932	149	20	
	50	9.761 7911	297	9.850 0128	447	0.149 9872	9.911 7783	149	10	
18	0	9.761 8208	298	9.850 0575	446	0.149 9425	9.911 7634	149	0	42
	10	9.761 8506	297	9.850 1021	447	0.149 8979	9.911 7485	149	50	
	20	9.761 8803	297	9.850 1468	446	0.149 8532	9.911 7336	149	40	
	30	9.761 9100	298	9.850 1914	446	0.149 8086	9.911 7187	150	30	
	40	9.761 9398	297	9.850 2360	447	0.149 7640	9.911 7037	149	20	
	50	9.761 9695	297	9.850 2807	446	0.149 7193	9.911 6888	149	10	
19	0	9.761 9992	297	9.850 3253	446	0.149 6747	9.911 6739	149	0	41
	10	9.762 0289	297	9.850 3699	447	0.149 6301	9.911 6590	149	50	
	20	9.762 0586	298	9.850 4146	446	0.149 5854	9.911 6441	150	40	
	30	9.762 0884	297	9.850 4592	446	0.149 5408	9.911 6291	149	30	
	40	9.762 1181	297	9.850 5038	447	0.149 4962	9.911 6142	149	20	
	50	9.762 1478	297	9.850 5485	446	0.149 4515	9.911 5993	149	10	
20	0	9.762 1775		9.850 5931		0.149 4069	9.911 5844		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

54°

	447
1	44.7
2	89.4
3	134.1
4	178.8
5	223.5
6	268.2
7	312.9
8	357.6
9	402.3

	446
1	44.6
2	89.2
3	133.8
4	178.4
5	223.0
6	267.6
7	312.2
8	356.8
9	401.4

	298
1	29.8
2	59.6
3	89.4
4	119.2
5	149.0
6	178.8
7	208.6
8	238.4
9	268.2

	297
1	29.7
2	59.4
3	89.1
4	118.8
5	148.5
6	178.2
7	207.9
8	237.6
9	267.3

	149
1	14.9
2	29.8
3	44.7
4	59.6
5	74.5
6	89.4
7	104.3
8	119.2
9	134.1

	150
1	15.0
2	30.0
3	45.0
4	60.0
5	75.0
6	90.0
7	105.0
8	120.0
9	135.0

447	
1	44.7
2	89.4
3	134.1
4	178.8
5	223.5
6	268.2
7	312.9
8	357.6
9	402.3

446	
1	44.6
2	89.2
3	133.8
4	178.4
5	223.0
6	267.6
7	312.2
8	356.8
9	401.4

297	
1	29.7
2	59.4
3	89.1
4	118.8
5	148.5
6	178.2
7	207.9
8	237.6
9	267.3

296	
1	29.6
2	59.2
3	88.8
4	118.4
5	148.0
6	177.6
7	207.2
8	236.8
9	266.4

149	
1	14.9
2	29.8
3	44.7
4	59.6
5	74.5
6	89.4
7	104.3
8	119.2
9	134.1

150	
1	15.0
2	30.0
3	45.0
4	60.0
5	75.0
6	90.0
7	105.0
8	120.0
9	135.0

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.762 1775	297	9.850 5931	446	0.149 4069	9.911 5844	150	0	40
	10	9.762 2072	297	9.850 6377	447	0.149 3623	9.911 5694	149	50	
	20	9.762 2369	297	9.850 6824	446	0.149 3176	9.911 5545	149	40	
	30	9.762 2666	297	9.850 7270	446	0.149 2730	9.911 5396	149	30	
	40	9.762 2963	296	9.850 7716	446	0.149 2284	9.911 5247	150	20	
	50	9.762 3259	297	9.850 8162	446	0.149 1838	9.911 5097	149	10	
21	0	9.762 3556	297	9.850 8608	447	0.149 1392	9.911 4948	149	0	39
	10	9.762 3853	297	9.850 9055	446	0.149 0945	9.911 4799	150	50	
	20	9.762 4150	297	9.850 9501	446	0.149 0499	9.911 4649	149	40	
	30	9.762 4447	296	9.850 9947	446	0.149 0053	9.911 4500	150	30	
	40	9.762 4743	297	9.851 0393	446	0.148 9607	9.911 4350	149	20	
	50	9.762 5040	297	9.851 0839	446	0.148 9161	9.911 4201	150	10	
22	0	9.762 5337	296	9.851 1285	446	0.148 8715	9.911 4051	149	0	38
	10	9.762 5633	297	9.851 1731	446	0.148 8269	9.911 3902	149	50	
	20	9.762 5930	296	9.851 2177	446	0.148 7823	9.911 3753	150	40	
	30	9.762 6226	297	9.851 2623	446	0.148 7377	9.911 3603	149	30	
	40	9.762 6523	296	9.851 3069	446	0.148 6931	9.911 3454	150	20	
	50	9.762 6819	297	9.851 3515	446	0.148 6485	9.911 3304	149	10	
23	0	9.762 7116	296	9.851 3961	446	0.148 6039	9.911 3155	150	0	37
	10	9.762 7412	297	9.851 4407	446	0.148 5593	9.911 3005	150	50	
	20	9.762 7709	296	9.851 4853	446	0.148 5147	9.911 2855	149	40	
	30	9.762 8005	297	9.851 5299	446	0.148 4701	9.911 2706	150	30	
	40	9.762 8302	296	9.851 5745	446	0.148 4255	9.911 2556	149	20	
	50	9.762 8598	296	9.851 6191	446	0.148 3809	9.911 2407	150	10	
24	0	9.762 8894	296	9.851 6637	446	0.148 3363	9.911 2257	150	0	36
	10	9.762 9190	297	9.851 7083	446	0.148 2917	9.911 2107	149	50	
	20	9.762 9487	296	9.851 7529	446	0.148 2471	9.911 1958	150	40	
	30	9.762 9783	296	9.851 7975	446	0.148 2025	9.911 1808	150	30	
	40	9.763 0079	296	9.851 8421	445	0.148 1579	9.911 1658	149	20	
	50	9.763 0375	296	9.851 8866	446	0.148 1134	9.911 1509	150	10	
25	0	9.763 0671	296	9.851 9312	446	0.148 0688	9.911 1359	150	0	35
	10	9.763 0967	296	9.851 9758	446	0.148 0242	9.911 1209	150	50	
	20	9.763 1263	296	9.852 0204	446	0.147 9796	9.911 1059	149	40	
	30	9.763 1559	296	9.852 0650	445	0.147 9350	9.911 0910	150	30	
	40	9.763 1855	296	9.852 1095	446	0.147 8905	9.911 0760	150	20	
	50	9.763 2151	296	9.852 1541	446	0.147 8459	9.911 0610	150	10	
26	0	9.763 2447	296	9.852 1987	446	0.147 8013	9.911 0460	149	0	34
	10	9.763 2743	296	9.852 2433	445	0.147 7567	9.911 0311	150	50	
	20	9.763 3039	296	9.852 2878	446	0.147 7122	9.911 0161	150	40	
	30	9.763 3335	296	9.852 3324	446	0.147 6676	9.911 0011	150	30	
	40	9.763 3631	295	9.852 3770	445	0.147 6230	9.910 9861	150	20	
	50	9.763 3926	296	9.852 4215	446	0.147 5785	9.910 9711	150	10	
27	0	9.763 4222	296	9.852 4661	446	0.147 5339	9.910 9561	150	0	33
	10	9.763 4518	296	9.852 5107	445	0.147 4893	9.910 9411	150	50	
	20	9.763 4814	295	9.852 5552	446	0.147 4448	9.910 9261	150	40	
	30	9.763 5109	296	9.852 5998	445	0.147 4002	9.910 9111	150	30	
	40	9.763 5405	295	9.852 6443	446	0.147 3557	9.910 8961	150	20	
	50	9.763 5700	296	9.852 6889	446	0.147 3111	9.910 8811	150	10	
28	0	9.763 5996	296	9.852 7335	445	0.147 2665	9.910 8661	150	0	32
	10	9.763 6292	295	9.852 7780	446	0.147 2220	9.910 8511	150	50	
	20	9.763 6587	295	9.852 8226	445	0.147 1774	9.910 8361	150	40	
	30	9.763 6882	296	9.852 8671	446	0.147 1329	9.910 8211	150	30	
	40	9.763 7178	295	9.852 9117	445	0.147 0883	9.910 8061	150	20	
	50	9.763 7473	296	9.852 9562	446	0.147 0438	9.910 7911	150	10	
29	0	9.763 7769	295	9.853 0008	445	0.146 9992	9.910 7761	150	0	31
	10	9.763 8064	295	9.853 0453	445	0.146 9547	9.910 7611	150	50	
	20	9.763 8359	296	9.853 0898	446	0.146 9102	9.910 7461	150	40	
	30	9.763 8655	295	9.853 1344	445	0.146 8656	9.910 7311	150	30	
	40	9.763 8950	295	9.853 1789	446	0.146 8211	9.910 7161	150	20	
	50	9.763 9245	295	9.853 2235	445	0.146 7765	9.910 7011	151	10	
30	0	9.763 9540		9.853 2680		0.146 7320	9.910 6860		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

35°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.763 9540	296	9.853 2680	445	0.146 7320	9.910 6860	150	0	30
	10	9.763 9836	295	9.853 3125	446	0.146 6875	9.910 6710	150	50	
	20	9.764 0131	295	9.853 3571	445	0.146 6429	9.910 6560	150	40	
	30	9.764 0426	295	9.853 4016	445	0.146 5984	9.910 6410	151	30	
	40	9.764 0721	295	9.853 4461	446	0.146 5539	9.910 6259	150	20	
	50	9.764 1016	295	9.853 4907	445	0.146 5093	9.910 6109	150	10	
31	0	9.764 1311	295	9.853 5352	445	0.146 4648	9.910 5959	150	0	29
	10	9.764 1606	295	9.853 5797	446	0.146 4203	9.910 5809	151	50	
	20	9.764 1901	295	9.853 6243	445	0.146 3757	9.910 5658	150	40	
	30	9.764 2196	295	9.853 6688	445	0.146 3312	9.910 5508	150	30	
	40	9.764 2491	295	9.853 7133	445	0.146 2867	9.910 5358	151	20	
	50	9.764 2786	294	9.853 7578	445	0.146 2422	9.910 5207	150	10	
32	0	9.764 3080	295	9.853 8023	446	0.146 1977	9.910 5057	150	0	28
	10	9.764 3375	295	9.853 8469	445	0.146 1531	9.910 4907	151	50	
	20	9.764 3670	295	9.853 8914	445	0.146 1086	9.910 4756	150	40	
	30	9.764 3965	294	9.853 9359	445	0.146 0641	9.910 4606	151	30	
	40	9.764 4259	295	9.853 9804	445	0.146 0196	9.910 4455	150	20	
	50	9.764 4554	295	9.854 0249	445	0.145 9751	9.910 4305	150	10	
33	0	9.764 4849	294	9.854 0694	445	0.145 9306	9.910 4155	151	0	27
	10	9.764 5143	295	9.854 1139	445	0.145 8861	9.910 4004	150	50	
	20	9.764 5438	295	9.854 1584	445	0.145 8416	9.910 3854	151	40	
	30	9.764 5733	294	9.854 2029	446	0.145 7971	9.910 3703	150	30	
	40	9.764 6027	295	9.854 2475	445	0.145 7525	9.910 3553	151	20	
	50	9.764 6322	294	9.854 2920	445	0.145 7080	9.910 3402	151	10	
34	0	9.764 6616	294	9.854 3365	445	0.145 6635	9.910 3251	150	0	26
	10	9.764 6910	295	9.854 3810	445	0.145 6190	9.910 3101	151	50	
	20	9.764 7205	294	9.854 4255	445	0.145 5745	9.910 2950	150	40	
	30	9.764 7499	295	9.854 4700	445	0.145 5300	9.910 2800	151	30	
	40	9.764 7794	294	9.854 5145	444	0.145 4855	9.910 2649	151	20	
	50	9.764 8088	294	9.854 5589	445	0.145 4411	9.910 2498	150	10	
35	0	9.764 8382	295	9.854 6034	445	0.145 3966	9.910 2348	151	0	25
	10	9.764 8677	294	9.854 6479	445	0.145 3521	9.910 2197	150	50	
	20	9.764 8971	294	9.854 6924	445	0.145 3076	9.910 2047	151	40	
	30	9.764 9265	294	9.854 7369	445	0.145 2631	9.910 1896	151	30	
	40	9.764 9559	294	9.854 7814	445	0.145 2186	9.910 1745	151	20	
	50	9.764 9853	294	9.854 8259	445	0.145 1741	9.910 1594	150	10	
36	0	9.765 0147	294	9.854 8704	445	0.145 1296	9.910 1444	151	0	24
	10	9.765 0441	294	9.854 9149	444	0.145 0851	9.910 1293	151	50	
	20	9.765 0735	295	9.854 9593	445	0.145 0407	9.910 1142	151	40	
	30	9.765 1030	294	9.855 0038	445	0.144 9962	9.910 0991	150	30	
	40	9.765 1324	293	9.855 0483	445	0.144 9517	9.910 0841	151	20	
	50	9.765 1617	294	9.855 0928	444	0.144 9072	9.910 0690	151	10	
37	0	9.765 1911	294	9.855 1372	445	0.144 8628	9.910 0539	151	0	23
	10	9.765 2205	294	9.855 1817	445	0.144 8183	9.910 0388	151	50	
	20	9.765 2499	294	9.855 2262	445	0.144 7738	9.910 0237	151	40	
	30	9.765 2793	294	9.855 2707	444	0.144 7293	9.910 0086	151	30	
	40	9.765 3087	294	9.855 3151	445	0.144 6849	9.909 9935	150	20	
	50	9.765 3381	293	9.855 3596	445	0.144 6404	9.909 9785	151	10	
38	0	9.765 3674	294	9.855 4041	444	0.144 5959	9.909 9634	151	0	22
	10	9.765 3968	294	9.855 4485	445	0.144 5515	9.909 9483	151	50	
	20	9.765 4262	293	9.855 4930	445	0.144 5070	9.909 9332	151	40	
	30	9.765 4555	294	9.855 5375	444	0.144 4625	9.909 9181	151	30	
	40	9.765 4849	294	9.855 5819	445	0.144 4181	9.909 9030	151	20	
	50	9.765 5143	293	9.855 6264	444	0.144 3736	9.909 8879	151	10	
39	0	9.765 5436	294	9.855 6708	445	0.144 3292	9.909 8728	151	0	21
	10	9.765 5730	293	9.855 7153	444	0.144 2847	9.909 8577	151	50	
	20	9.765 6023	294	9.855 7597	445	0.144 2403	9.909 8426	151	40	
	30	9.765 6317	293	9.855 8042	445	0.144 1958	9.909 8275	151	30	
	40	9.765 6610	294	9.855 8487	444	0.144 1513	9.909 8124	151	20	
	50	9.765 6904	293	9.855 8931	445	0.144 1069	9.909 7973	152	10	
40	0	9.765 7197		9.855 9376		0.144 0624	9.909 7821		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

54°

	445
1	44.5
2	89.0
3	133.5
4	178.0
5	222.5
6	267.0
7	311.5
8	356.0
9	400.5

	444
1	44.4
2	88.8
3	133.2
4	177.6
5	222.0
6	266.4
7	310.8
8	355.2
9	399.6

	295
1	29.5
2	59.0
3	88.5
4	118.0
5	147.5
6	177.0
7	206.5
8	236.0
9	265.5

	294
1	29.4
2	58.8
3	88.2
4	117.6
5	147.0
6	176.4
7	205.8
8	235.2
9	264.6

	293
1	29.3
2	58.6
3	87.9
4	117.2
5	146.5
6	175.8
7	205.1
8	234.4
9	263.7

	151
1	15.1
2	30.2
3	45.3
4	60.4
5	75.5
6	90.6
7	105.7
8	120.8
9	135.9

35°

	445	444	294	293	292	151
1	44.5	44.4	29.4	29.3	29.2	15.1
2	89.0	88.8	58.8	58.6	58.4	30.2
3	133.5	133.2	88.2	87.9	87.6	45.3
4	178.0	177.6	117.6	117.2	116.8	60.4
5	222.5	222.0	147.0	146.5	146.0	75.5
6	267.0	266.4	176.4	175.8	175.2	90.6
7	311.5	310.8	205.8	205.1	204.4	105.7
8	356.0	355.2	235.2	234.4	233.6	120.8
9	400.5	399.6	264.6	263.7	262.8	135.9

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.765 7197	293	9.855 9376	444	0.144 0624	9.909 7821	151	0	20
	10	9.765 7490	294	9.855 9820	444	0.144 0180	9.909 7670	151	50	
	20	9.765 7784	293	9.856 0264	445	0.143 9736	9.909 7519	151	40	
	30	9.765 8077	293	9.856 0709	444	0.143 9291	9.909 7368	151	30	
	40	9.765 8370	293	9.856 1153	445	0.143 8847	9.909 7217	151	20	
	50	9.765 8663	294	9.856 1598	444	0.143 8402	9.909 7066	151	10	
41	0	9.765 8957	293	9.856 2042	445	0.143 7958	9.909 6915	152	0	19
	10	9.765 9250	293	9.856 2487	444	0.143 7513	9.909 6763	151	50	
	20	9.765 9543	293	9.856 2931	444	0.143 7069	9.909 6612	151	40	
	30	9.765 9836	293	9.856 3375	445	0.143 6625	9.909 6461	151	30	
	40	9.766 0129	293	9.856 3820	444	0.143 6180	9.909 6310	152	20	
	50	9.766 0422	293	9.856 4264	444	0.143 5736	9.909 6158	151	10	
42	0	9.766 0715	293	9.856 4708	445	0.143 5292	9.909 6007	151	0	18
	10	9.766 1008	293	9.856 5153	444	0.143 4847	9.909 5856	152	50	
	20	9.766 1301	293	9.856 5597	444	0.143 4403	9.909 5704	151	40	
	30	9.766 1594	293	9.856 6041	444	0.143 3959	9.909 5553	151	30	
	40	9.766 1887	293	9.856 6485	445	0.143 3515	9.909 5402	152	20	
	50	9.766 2180	293	9.856 6930	444	0.143 3070	9.909 5250	151	10	
43	0	9.766 2473	293	9.856 7374	444	0.143 2626	9.909 5099	151	0	17
	10	9.766 2766	292	9.856 7818	444	0.143 2182	9.909 4948	152	50	
	20	9.766 3058	293	9.856 8262	445	0.143 1738	9.909 4796	151	40	
	30	9.766 3351	293	9.856 8707	444	0.143 1293	9.909 4645	152	30	
	40	9.766 3644	293	9.856 9151	444	0.143 0849	9.909 4493	151	20	
	50	9.766 3937	292	9.856 9595	444	0.143 0405	9.909 4342	152	10	
44	0	9.766 4229	293	9.857 0039	444	0.142 9961	9.909 4190	151	0	16
	10	9.766 4522	293	9.857 0483	444	0.142 9517	9.909 4039	152	50	
	20	9.766 4815	292	9.857 0927	444	0.142 9073	9.909 3887	151	40	
	30	9.766 5107	293	9.857 1371	444	0.142 8629	9.909 3736	152	30	
	40	9.766 5400	292	9.857 1815	445	0.142 8185	9.909 3584	151	20	
	50	9.766 5692	293	9.857 2260	444	0.142 7740	9.909 3433	152	10	
45	0	9.766 5985	292	9.857 2704	444	0.142 7296	9.909 3281	151	0	15
	10	9.766 6277	293	9.857 3148	444	0.142 6852	9.909 3130	152	50	
	20	9.766 6570	292	9.857 3592	444	0.142 6408	9.909 2978	152	40	
	30	9.766 6862	292	9.857 4036	444	0.142 5964	9.909 2826	151	30	
	40	9.766 7154	293	9.857 4480	444	0.142 5520	9.909 2675	152	20	
	50	9.766 7447	292	9.857 4924	444	0.142 5076	9.909 2523	152	10	
46	0	9.766 7739	292	9.857 5368	444	0.142 4632	9.909 2371	151	0	14
	10	9.766 8031	293	9.857 5812	444	0.142 4188	9.909 2220	152	50	
	20	9.766 8324	292	9.857 6256	443	0.142 3744	9.909 2068	152	40	
	30	9.766 8616	292	9.857 6699	444	0.142 3301	9.909 1916	151	30	
	40	9.766 8908	292	9.857 7143	444	0.142 2857	9.909 1765	152	20	
	50	9.766 9200	292	9.857 7587	444	0.142 2413	9.909 1613	152	10	
47	0	9.766 9492	292	9.857 8031	444	0.142 1969	9.909 1461	152	0	13
	10	9.766 9784	292	9.857 8475	444	0.142 1525	9.909 1309	151	50	
	20	9.767 0076	292	9.857 8919	444	0.142 1081	9.909 1158	152	40	
	30	9.767 0368	293	9.857 9363	444	0.142 0637	9.909 1006	152	30	
	40	9.767 0661	291	9.857 9807	443	0.142 0193	9.909 0854	152	20	
	50	9.767 0952	292	9.858 0250	444	0.141 9750	9.909 0702	152	10	
48	0	9.767 1244	292	9.858 0694	444	0.141 9306	9.909 0550	152	0	12
	10	9.767 1536	292	9.858 1138	444	0.141 8862	9.909 0398	151	50	
	20	9.767 1828	292	9.858 1582	443	0.141 8418	9.909 0247	152	40	
	30	9.767 2120	292	9.858 2025	444	0.141 7975	9.909 0095	152	30	
	40	9.767 2412	292	9.858 2469	444	0.141 7531	9.908 9943	152	20	
	50	9.767 2704	292	9.858 2913	444	0.141 7087	9.908 9791	152	10	
49	0	9.767 2996	291	9.858 3357	443	0.141 6643	9.908 9639	152	0	11
	10	9.767 3287	292	9.858 3800	444	0.141 6200	9.908 9487	152	50	
	20	9.767 3579	292	9.858 4244	444	0.141 5756	9.908 9335	152	40	
	30	9.767 3871	291	9.858 4688	443	0.141 5312	9.908 9183	152	30	
	40	9.767 4162	292	9.858 5131	444	0.141 4869	9.908 9031	152	20	
	50	9.767 4454	292	9.858 5575	444	0.141 4425	9.908 8879	152	10	
50	0	9.767 4746		9.858 6019		0.141 3981	9.908 8727		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

54°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.767 4746	291	9.858 6019	443	0.141 3981	9.908 8727	152	0	10
	10	9.767 5037	292	9.858 6462	444	0.141 3538	9.908 8575	152	50	
	20	9.767 5329	291	9.858 6906	443	0.141 3094	9.908 8423	152	40	
	30	9.767 5620	292	9.858 7349	444	0.141 2651	9.908 8271	152	30	
	40	9.767 5912	291	9.858 7793	444	0.141 2207	9.908 8119	152	20	
	50	9.767 6203	291	9.858 8237	443	0.141 1763	9.908 7967	153	10	
51	0	9.767 6494	292	9.858 8680	444	0.141 1320	9.908 7814	152	0	9
	10	9.767 6786	291	9.858 9124	443	0.141 0876	9.908 7662	152	50	
	20	9.767 7077	292	9.858 9567	444	0.141 0433	9.908 7510	152	40	
	30	9.767 7369	291	9.859 0011	443	0.140 9989	9.908 7358	152	30	
	40	9.767 7660	291	9.859 0454	444	0.140 9546	9.908 7206	152	20	
	50	9.767 7951	291	9.859 0898	443	0.140 9102	9.908 7054	153	10	
52	0	9.767 8242	292	9.859 1341	443	0.140 8659	9.908 6901	152	0	8
	10	9.767 8534	291	9.859 1784	444	0.140 8216	9.908 6749	152	50	
	20	9.767 8825	291	9.859 2228	443	0.140 7772	9.908 6597	152	40	
	30	9.767 9116	291	9.859 2671	444	0.140 7329	9.908 6445	153	30	
	40	9.767 9407	291	9.859 3115	443	0.140 6885	9.908 6292	152	20	
	50	9.767 9698	291	9.859 3558	444	0.140 6442	9.908 6140	152	10	
53	0	9.767 9989	291	9.859 4002	443	0.140 5998	9.908 5988	153	0	7
	10	9.768 0280	291	9.859 4445	443	0.140 5555	9.908 5835	152	50	
	20	9.768 0571	291	9.859 4888	444	0.140 5112	9.908 5683	152	40	
	30	9.768 0862	291	9.859 5332	443	0.140 4668	9.908 5531	153	30	
	40	9.768 1153	291	9.859 5775	443	0.140 4225	9.908 5378	152	20	
	50	9.768 1444	291	9.859 6218	443	0.140 3782	9.908 5226	153	10	
54	0	9.768 1735	291	9.859 6661	444	0.140 3339	9.908 5073	152	0	6
	10	9.768 2026	291	9.859 7105	443	0.140 2895	9.908 4921	152	50	
	20	9.768 2317	290	9.859 7548	443	0.140 2452	9.908 4769	153	40	
	30	9.768 2607	291	9.859 7991	443	0.140 2009	9.908 4616	152	30	
	40	9.768 2898	291	9.859 8434	444	0.140 1566	9.908 4464	153	20	
	50	9.768 3189	291	9.859 8878	443	0.140 1122	9.908 4311	152	10	
55	0	9.768 3480	290	9.859 9321	443	0.140 0679	9.908 4159	153	0	5
	10	9.768 3770	291	9.859 9764	443	0.140 0236	9.908 4006	152	50	
	20	9.768 4061	290	9.860 0207	443	0.139 9793	9.908 3854	153	40	
	30	9.768 4351	291	9.860 0650	444	0.139 9350	9.908 3701	152	30	
	40	9.768 4642	291	9.860 1094	443	0.139 8906	9.908 3549	153	20	
	50	9.768 4933	290	9.860 1537	443	0.139 8463	9.908 3396	153	10	
56	0	9.768 5223	291	9.860 1980	443	0.139 8020	9.908 3243	152	0	4
	10	9.768 5514	290	9.860 2423	443	0.139 7577	9.908 3091	153	50	
	20	9.768 5804	291	9.860 2866	443	0.139 7134	9.908 2938	153	40	
	30	9.768 6095	290	9.860 3309	443	0.139 6691	9.908 2785	152	30	
	40	9.768 6385	290	9.860 3752	443	0.139 6248	9.908 2633	153	20	
	50	9.768 6675	291	9.860 4195	443	0.139 5805	9.908 2480	153	10	
57	0	9.768 6966	290	9.860 4638	443	0.139 5362	9.908 2327	152	0	3
	10	9.768 7256	290	9.860 5081	443	0.139 4919	9.908 2175	153	50	
	20	9.768 7546	291	9.860 5524	443	0.139 4476	9.908 2022	153	40	
	30	9.768 7837	290	9.860 5967	443	0.139 4033	9.908 1869	152	30	
	40	9.768 8127	290	9.860 6410	443	0.139 3590	9.908 1717	153	20	
	50	9.768 8417	290	9.860 6853	443	0.139 3147	9.908 1564	153	10	
58	0	9.768 8707	290	9.860 7296	443	0.139 2704	9.908 1411	153	0	2
	10	9.768 8997	290	9.860 7739	443	0.139 2261	9.908 1258	153	50	
	20	9.768 9287	290	9.860 8182	443	0.139 1818	9.908 1105	152	40	
	30	9.768 9577	291	9.860 8625	443	0.139 1375	9.908 0953	153	30	
	40	9.768 9868	290	9.860 9068	443	0.139 0932	9.908 0800	153	20	
	50	9.769 0158	290	9.860 9511	443	0.139 0489	9.908 0647	153	10	
59	0	9.769 0448	289	9.860 9954	442	0.139 0046	9.908 0494	153	0	1
	10	9.769 0737	290	9.861 0396	443	0.138 9604	9.908 0341	153	50	
	20	9.769 1027	290	9.861 0839	443	0.138 9161	9.908 0188	153	40	
	30	9.769 1317	290	9.861 1282	443	0.138 8718	9.908 0035	153	30	
	40	9.769 1607	290	9.861 1725	443	0.138 8275	9.907 9882	153	20	
	50	9.769 1897	290	9.861 2168	442	0.138 7832	9.907 9729	153	10	
60	0	9.769 2187		9.861 2610		0.138 7390	9.907 9576		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

54°

	443
1	44.3
2	88.6
3	132.9
4	177.2
5	221.5
6	265.8
7	310.1
8	354.4
9	398.7

	442
1	44.2
2	88.4
3	132.6
4	176.8
5	221.0
6	265.2
7	309.4
8	353.6
9	397.8

	291
1	29.1
2	58.2
3	87.3
4	116.4
5	145.5
6	174.6
7	203.7
8	232.8
9	261.9

	290
1	29.0
2	58.0
3	87.0
4	116.0
5	145.0
6	174.0
7	203.0
8	232.0
9	261.0

	152
1	15.2
2	30.4
3	45.6
4	60.8
5	76.0
6	91.2
7	106.4
8	121.6
9	136.8

	153
1	15.3
2	30.6
3	45.9
4	61.2
5	76.5
6	91.8
7	107.1
8	122.4
9	137.7

36°

	443
1	44.3
2	88.6
3	132.9
4	177.2
5	221.5
6	265.8
7	310.1
8	354.4
9	398.7

	442
1	44.2
2	88.4
3	132.6
4	176.8
5	221.0
6	265.2
7	309.4
8	353.6
9	397.8

	290
1	29.0
2	58.0
3	87.0
4	116.0
5	145.0
6	174.0
7	203.0
8	232.0
9	261.0

	289
1	28.9
2	57.8
3	86.7
4	115.6
5	144.5
6	173.4
7	202.3
8	231.2
9	260.1

	288
1	28.8
2	57.6
3	86.4
4	115.2
5	144.0
6	172.8
7	201.6
8	230.4
9	259.2

	153
1	15.3
2	30.6
3	45.9
4	61.2
5	76.5
6	91.8
7	107.1
8	122.4
9	137.7

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.769 2187	290	9.861 2610	443	0.138 7390	9.907 9576	153	0	60
	10	9.769 2477	289	9.861 3053	443	0.138 6947	9.907 9423	153	50	
	20	9.769 2766	290	9.861 3496	443	0.138 6504	9.907 9270	153	40	
	30	9.769 3056	290	9.861 3939	442	0.138 6061	9.907 9117	153	30	
	40	9.769 3346	289	9.861 4381	443	0.138 5619	9.907 8964	153	20	
	50	9.769 3635	290	9.861 4824	443	0.138 5176	9.907 8811	153	10	
1	0	9.769 3925	290	9.861 5267	442	0.138 4733	9.907 8658	153	0	59
	10	9.769 4215	289	9.861 5709	443	0.138 4291	9.907 8505	153	50	
	20	9.769 4504	290	9.861 6152	443	0.138 3848	9.907 8352	153	40	
	30	9.769 4794	289	9.861 6595	442	0.138 3405	9.907 8199	153	30	
	40	9.769 5083	290	9.861 7037	443	0.138 2963	9.907 8046	153	20	
	50	9.769 5373	289	9.861 7480	443	0.138 2520	9.907 7893	153	10	
2	0	9.769 5662	290	9.861 7923	442	0.138 2077	9.907 7740	154	0	58
	10	9.769 5952	289	9.861 8365	443	0.138 1635	9.907 7586	153	50	
	20	9.769 6241	290	9.861 8808	442	0.138 1192	9.907 7433	153	40	
	30	9.769 6531	289	9.861 9250	443	0.138 0750	9.907 7280	153	30	
	40	9.769 6820	289	9.861 9693	443	0.138 0307	9.907 7127	153	20	
	50	9.769 7109	289	9.862 0136	442	0.137 9864	9.907 6974	154	10	
3	0	9.769 7398	290	9.862 0578	443	0.137 9422	9.907 6820	153	0	57
	10	9.769 7688	289	9.862 1021	442	0.137 8979	9.907 6667	153	50	
	20	9.769 7977	289	9.862 1463	443	0.137 8537	9.907 6514	153	40	
	30	9.769 8266	289	9.862 1906	442	0.137 8094	9.907 6361	154	30	
	40	9.769 8555	289	9.862 2348	443	0.137 7652	9.907 6207	153	20	
	50	9.769 8844	290	9.862 2791	442	0.137 7209	9.907 6054	153	10	
4	0	9.769 9134	289	9.862 3233	442	0.137 6767	9.907 5901	154	0	56
	10	9.769 9423	289	9.862 3675	443	0.137 6325	9.907 5747	153	50	
	20	9.769 9712	289	9.862 4118	442	0.137 5882	9.907 5594	154	40	
	30	9.770 0001	289	9.862 4560	443	0.137 5440	9.907 5440	153	30	
	40	9.770 0290	289	9.862 5003	442	0.137 4997	9.907 5287	153	20	
	50	9.770 0579	289	9.862 5445	442	0.137 4555	9.907 5134	154	10	
5	0	9.770 0868	288	9.862 5887	443	0.137 4113	9.907 4980	153	0	55
	10	9.770 1156	289	9.862 6330	442	0.137 3670	9.907 4827	154	50	
	20	9.770 1445	289	9.862 6772	442	0.137 3228	9.907 4673	153	40	
	30	9.770 1734	289	9.862 7214	443	0.137 2786	9.907 4520	154	30	
	40	9.770 2023	289	9.862 7657	442	0.137 2343	9.907 4366	153	20	
	50	9.770 2312	289	9.862 8099	442	0.137 1901	9.907 4213	154	10	
6	0	9.770 2601	288	9.862 8541	443	0.137 1459	9.907 4059	153	0	54
	10	9.770 2889	289	9.862 8984	442	0.137 1016	9.907 3906	154	50	
	20	9.770 3178	289	9.862 9426	442	0.137 0574	9.907 3752	153	40	
	30	9.770 3467	288	9.862 9868	442	0.137 0132	9.907 3599	154	30	
	40	9.770 3755	289	9.863 0310	443	0.136 9690	9.907 3445	154	20	
	50	9.770 4044	288	9.863 0753	442	0.136 9247	9.907 3291	153	10	
7	0	9.770 4332	289	9.863 1195	442	0.136 8805	9.907 3138	154	0	53
	10	9.770 4621	289	9.863 1637	442	0.136 8363	9.907 2984	154	50	
	20	9.770 4910	288	9.863 2079	442	0.136 7921	9.907 2830	153	40	
	30	9.770 5198	288	9.863 2521	442	0.136 7479	9.907 2677	154	30	
	40	9.770 5486	289	9.863 2963	442	0.136 7037	9.907 2523	154	20	
	50	9.770 5775	288	9.863 3405	443	0.136 6595	9.907 2369	153	10	
8	0	9.770 6063	289	9.863 3848	442	0.136 6152	9.907 2216	154	0	52
	10	9.770 6352	288	9.863 4290	442	0.136 5710	9.907 2062	154	50	
	20	9.770 6640	288	9.863 4732	442	0.136 5268	9.907 1908	154	40	
	30	9.770 6928	289	9.863 5174	442	0.136 4826	9.907 1754	153	30	
	40	9.770 7217	288	9.863 5616	442	0.136 4384	9.907 1601	154	20	
	50	9.770 7505	288	9.863 6058	442	0.136 3942	9.907 1447	154	10	
9	0	9.770 7793	288	9.863 6500	442	0.136 3500	9.907 1293	154	0	51
	10	9.770 8081	288	9.863 6942	442	0.136 3058	9.907 1139	154	50	
	20	9.770 8369	289	9.863 7384	442	0.136 2616	9.907 0985	153	40	
	30	9.770 8658	288	9.863 7826	442	0.136 2174	9.907 0832	154	30	
	40	9.770 8946	288	9.863 8268	442	0.136 1732	9.907 0678	154	20	
	50	9.770 9234	288	9.863 8710	442	0.136 1290	9.907 0524	154	10	
10	0	9.770 9522		9.863 9152		0.136 0848	9.907 0370		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

53°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.770 9522	288	9.863 9152	442	0.136 0848	9.907 0370	154	0	50
	10	9.770 9810	288	9.863 9594	442	0.136 0406	9.907 0216	154	50	
	20	9.771 0098	288	9.864 0036	442	0.135 9964	9.907 0062	154	40	
	30	9.771 0386	288	9.864 0478	442	0.135 9522	9.906 9908	154	30	
	40	9.771 0674	288	9.864 0920	442	0.135 9080	9.906 9754	154	20	
	50	9.771 0962	287	9.864 1362	441	0.135 8638	9.906 9600	154	10	
11	0	9.771 1249	288	9.864 1803	442	0.135 8197	9.906 9446	154	0	49
	10	9.771 1537	288	9.864 2245	442	0.135 7755	9.906 9292	154	50	
	20	9.771 1825	288	9.864 2687	442	0.135 7313	9.906 9138	154	40	
	30	9.771 2113	288	9.864 3129	442	0.135 6871	9.906 8984	154	30	
	40	9.771 2401	287	9.864 3571	442	0.135 6429	9.906 8830	154	20	
	50	9.771 2688	288	9.864 4013	441	0.135 5987	9.906 8676	154	10	
12	0	9.771 2976	288	9.864 4454	442	0.135 5546	9.906 8522	154	0	48
	10	9.771 3264	287	9.864 4896	442	0.135 5104	9.906 8368	154	50	
	20	9.771 3551	288	9.864 5338	442	0.135 4662	9.906 8214	155	40	
	30	9.771 3839	288	9.864 5780	441	0.135 4220	9.906 8059	154	30	
	40	9.771 4127	287	9.864 6221	442	0.135 3779	9.906 7905	154	20	
	50	9.771 4414	288	9.864 6663	442	0.135 3337	9.906 7751	154	10	
13	0	9.771 4702	287	9.864 7105	441	0.135 2895	9.906 7597	154	0	47
	10	9.771 4989	288	9.864 7546	442	0.135 2454	9.906 7443	155	50	
	20	9.771 5277	287	9.864 7988	442	0.135 2012	9.906 7288	154	40	
	30	9.771 5564	287	9.864 8430	441	0.135 1570	9.906 7134	154	30	
	40	9.771 5851	288	9.864 8871	442	0.135 1129	9.906 6980	154	20	
	50	9.771 6139	287	9.864 9313	442	0.135 0687	9.906 6826	155	10	
14	0	9.771 6426	288	9.864 9755	441	0.135 0245	9.906 6671	154	0	46
	10	9.771 6714	287	9.865 0196	442	0.134 9804	9.906 6517	154	50	
	20	9.771 7001	287	9.865 0638	442	0.134 9362	9.906 6363	155	40	
	30	9.771 7288	287	9.865 1080	441	0.134 8920	9.906 6208	154	30	
	40	9.771 7575	287	9.865 1521	442	0.134 8479	9.906 6054	154	20	
	50	9.771 7862	288	9.865 1963	441	0.134 8037	9.906 5900	155	10	
15	0	9.771 8150	287	9.865 2404	442	0.134 7596	9.906 5745	154	0	45
	10	9.771 8437	287	9.865 2846	441	0.134 7154	9.906 5591	154	50	
	20	9.771 8724	287	9.865 3287	442	0.134 6713	9.906 5437	155	40	
	30	9.771 9011	287	9.865 3729	441	0.134 6271	9.906 5282	154	30	
	40	9.771 9298	287	9.865 4170	442	0.134 5830	9.906 5128	155	20	
	50	9.771 9585	287	9.865 4612	441	0.134 5388	9.906 4973	154	10	
16	0	9.771 9872	287	9.865 5053	442	0.134 4947	9.906 4819	155	0	44
	10	9.772 0159	287	9.865 5495	441	0.134 4505	9.906 4664	154	50	
	20	9.772 0446	287	9.865 5936	442	0.134 4064	9.906 4510	155	40	
	30	9.772 0733	287	9.865 6378	441	0.134 3622	9.906 4355	154	30	
	40	9.772 1020	287	9.865 6819	441	0.134 3181	9.906 4201	155	20	
	50	9.772 1307	286	9.865 7260	442	0.134 2740	9.906 4046	154	10	
17	0	9.772 1593	287	9.865 7702	441	0.134 2298	9.906 3892	155	0	43
	10	9.772 1880	287	9.865 8143	441	0.134 1857	9.906 3737	154	50	
	20	9.772 2167	287	9.865 8584	442	0.134 1416	9.906 3583	155	40	
	30	9.772 2454	286	9.865 9026	441	0.134 0974	9.906 3428	155	30	
	40	9.772 2740	287	9.865 9467	441	0.134 0533	9.906 3273	154	20	
	50	9.772 3027	287	9.865 9908	442	0.134 0092	9.906 3119	155	10	
18	0	9.772 3314	286	9.866 0350	441	0.133 9650	9.906 2964	155	0	42
	10	9.772 3600	287	9.866 0791	441	0.133 9209	9.906 2809	154	50	
	20	9.772 3887	287	9.866 1232	442	0.133 8768	9.906 2655	155	40	
	30	9.772 4174	286	9.866 1674	441	0.133 8326	9.906 2500	155	30	
	40	9.772 4460	287	9.866 2115	441	0.133 7885	9.906 2345	155	20	
	50	9.772 4747	286	9.866 2556	441	0.133 7444	9.906 2190	154	10	
19	0	9.772 5033	286	9.866 2997	442	0.133 7003	9.906 2036	155	0	41
	10	9.772 5319	287	9.866 3439	441	0.133 6561	9.906 1881	155	50	
	20	9.772 5606	286	9.866 3880	441	0.133 6120	9.906 1726	155	40	
	30	9.772 5892	287	9.866 4321	441	0.133 5679	9.906 1571	154	30	
	40	9.772 6179	286	9.866 4762	441	0.133 5238	9.906 1417	155	20	
	50	9.772 6465	286	9.866 5203	441	0.133 4797	9.906 1262	155	10	
20	0	9.772 6751		9.866 5644		0.133 4356	9.906 1107		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

53°

	442
1	44.2
2	88.4
3	132.6
4	176.8
5	221.0
6	265.2
7	309.4
8	353.6
9	397.8

	441
1	44.1
2	88.2
3	132.3
4	176.4
5	220.5
6	264.6
7	308.7
8	352.8
9	396.9

	287
1	28.7
2	57.4
3	86.1
4	114.8
5	143.5
6	172.2
7	200.9
8	229.6
9	258.3

	286
1	28.6
2	57.2
3	85.8
4	114.4
5	143.0
6	171.6
7	200.2
8	228.8
9	257.4

	154
1	15.4
2	30.8
3	46.2
4	61.6
5	77.0
6	92.4
7	107.8
8	123.2
9	138.6

	155
1	15.5
2	31.0
3	46.5
4	62.0
5	77.5
6	93.0
7	108.5
8	124.0
9	139.5

36°

	442
1	44.2
2	88.4
3	132.6
4	176.8
5	221.0
6	265.2
7	309.4
8	353.6
9	397.8

	441
1	44.1
2	88.2
3	132.3
4	176.4
5	220.5
6	264.6
7	308.7
8	352.8
9	396.9

	287
1	28.7
2	57.4
3	86.1
4	114.8
5	143.5
6	172.2
7	200.9
8	229.6
9	258.3

	286
1	28.6
2	57.2
3	85.8
4	114.4
5	143.0
6	171.6
7	200.2
8	228.8
9	257.4

	285
1	28.5
2	57.0
3	85.5
4	114.0
5	142.5
6	171.0
7	199.5
8	228.0
9	256.5

	155
1	15.5
2	31.0
3	46.5
4	62.0
5	77.5
6	93.0
7	108.5
8	124.0
9	139.5

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.772 6751	286	9.866 5644	442	0.133 4356	9.906 1107	155	0	40
	10	9.772 7037	287	9.866 6086	441	0.133 3914	9.906 0952	155	50	
	20	9.772 7324	286	9.866 6527	441	0.133 3473	9.906 0797	155	40	
	30	9.772 7610	286	9.866 6968	441	0.133 3032	9.906 0642	155	30	
	40	9.772 7896	286	9.866 7409	441	0.133 2591	9.906 0487	155	20	
	50	9.772 8182	286	9.866 7850	441	0.133 2150	9.906 0332	155	10	
21	0	9.772 8468	286	9.866 8291	441	0.133 1709	9.906 0177	155	0	39
	10	9.772 8754	287	9.866 8732	441	0.133 1268	9.906 0022	154	50	
	20	9.772 9041	286	9.866 9173	441	0.133 0827	9.905 9868	155	40	
	30	9.772 9327	286	9.866 9614	441	0.133 0386	9.905 9713	155	30	
	40	9.772 9613	286	9.867 0055	441	0.132 9945	9.905 9558	156	20	
	50	9.772 9899	286	9.867 0496	441	0.132 9504	9.905 9402	155	10	
22	0	9.773 0185	285	9.867 0937	441	0.132 9063	9.905 9247	155	0	38
	10	9.773 0470	286	9.867 1378	441	0.132 8622	9.905 9092	155	50	
	20	9.773 0756	286	9.867 1819	441	0.132 8181	9.905 8937	155	40	
	30	9.773 1042	286	9.867 2260	441	0.132 7740	9.905 8782	155	30	
	40	9.773 1328	286	9.867 2701	441	0.132 7299	9.905 8627	155	20	
	50	9.773 1614	286	9.867 3142	441	0.132 6858	9.905 8472	155	10	
23	0	9.773 1900	285	9.867 3583	441	0.132 6417	9.905 8317	155	0	37
	10	9.773 2185	286	9.867 4024	440	0.132 5976	9.905 8162	155	50	
	20	9.773 2471	286	9.867 4464	441	0.132 5536	9.905 8007	156	40	
	30	9.773 2757	285	9.867 4905	441	0.132 5095	9.905 7851	155	30	
	40	9.773 3042	286	9.867 5346	441	0.132 4654	9.905 7696	155	20	
	50	9.773 3328	286	9.867 5787	441	0.132 4213	9.905 7541	155	10	
24	0	9.773 3614	285	9.867 6228	441	0.132 3772	9.905 7386	155	0	36
	10	9.773 3899	286	9.867 6669	440	0.132 3331	9.905 7231	156	50	
	20	9.773 4185	285	9.867 7109	441	0.132 2891	9.905 7075	155	40	
	30	9.773 4470	286	9.867 7550	441	0.132 2450	9.905 6920	155	30	
	40	9.773 4756	285	9.867 7991	441	0.132 2009	9.905 6765	156	20	
	50	9.773 5041	286	9.867 8432	441	0.132 1568	9.905 6609	155	10	
25	0	9.773 5327	285	9.867 8873	440	0.132 1127	9.905 6454	155	0	35
	10	9.773 5612	285	9.867 9313	441	0.132 0687	9.905 6299	156	50	
	20	9.773 5897	286	9.867 9754	441	0.132 0246	9.905 6143	155	40	
	30	9.773 6183	285	9.868 0195	440	0.131 9805	9.905 5988	155	30	
	40	9.773 6468	285	9.868 0635	441	0.131 9365	9.905 5833	156	20	
	50	9.773 6753	286	9.868 1076	441	0.131 8924	9.905 5677	155	10	
26	0	9.773 7039	285	9.868 1517	440	0.131 8483	9.905 5522	156	0	34
	10	9.773 7324	285	9.868 1957	441	0.131 8043	9.905 5366	155	50	
	20	9.773 7609	285	9.868 2398	441	0.131 7602	9.905 5211	155	40	
	30	9.773 7894	285	9.868 2839	440	0.131 7161	9.905 5056	156	30	
	40	9.773 8179	285	9.868 3279	441	0.131 6721	9.905 4900	155	20	
	50	9.773 8464	285	9.868 3720	440	0.131 6280	9.905 4745	156	10	
27	0	9.773 8749	286	9.868 4160	441	0.131 5840	9.905 4589	155	0	33
	10	9.773 9035	285	9.868 4601	441	0.131 5399	9.905 4434	156	50	
	20	9.773 9320	285	9.868 5042	440	0.131 4958	9.905 4278	156	40	
	30	9.773 9605	285	9.868 5482	441	0.131 4518	9.905 4122	155	30	
	40	9.773 9890	284	9.868 5923	440	0.131 4077	9.905 3967	156	20	
	50	9.774 0174	285	9.868 6363	441	0.131 3637	9.905 3811	155	10	
28	0	9.774 0459	285	9.868 6804	440	0.131 3196	9.905 3656	156	0	32
	10	9.774 0744	285	9.868 7244	441	0.131 2756	9.905 3500	156	50	
	20	9.774 1029	285	9.868 7685	440	0.131 2315	9.905 3344	155	40	
	30	9.774 1314	285	9.868 8125	441	0.131 1875	9.905 3189	156	30	
	40	9.774 1599	284	9.868 8566	440	0.131 1434	9.905 3033	156	20	
	50	9.774 1883	285	9.868 9006	440	0.131 0994	9.905 2877	155	10	
29	0	9.774 2168	285	9.868 9446	441	0.131 0554	9.905 2722	156	0	31
	10	9 774 2453	285	9.868 9887	440	0.131 0113	9.905 2566	156	50	
	20	9.774 2738	284	9.869 0327	441	0.130 9673	9.905 2410	155	40	
	30	9.774 3022	285	9.869 0768	440	0.130 9232	9.905 2255	156	30	
	40	9.774 3307	284	9.869 1208	440	0.130 8792	9.905 2099	156	20	
	50	9.774 3591	285	9.869 1648	441	0.130 8352	9.905 1943	156	10	
30	0	9.774 3876		9.869 2089		0.130 7911	9.905 1787		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

53°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.774 3876	285	9.869 2089	440	0.130 7911	9.905 1787	156	0	30
	10	9.774 4161	284	9.869 2529	440	0.130 7471	9.905 1631	155	50	
	20	9.774 4445	284	9.869 2969	441	0.130 7031	9.905 1476	156	40	
	30	9.774 4729	285	9.869 3410	440	0.130 6590	9.905 1320	156	30	
	40	9.774 5014	284	9.869 3850	440	0.130 6150	9.905 1164	156	20	
	50	9.774 5298	285	9.869 4290	441	0.130 5710	9.905 1008	156	10	
31	0	9.774 5583	284	9.869 4731	440	0.130 5269	9.905 0852	156	0	29
	10	9.774 5867	284	9.869 5171	440	0.130 4829	9.905 0696	156	50	
	20	9.774 6151	285	9.869 5611	440	0.130 4389	9.905 0540	156	40	
	30	9.774 6436	284	9.869 6051	441	0.130 3949	9.905 0384	156	30	
	40	9.774 6720	284	9.869 6492	440	0.130 3508	9.905 0228	156	20	
	50	9.774 7004	284	9.869 6932	440	0.130 3068	9.905 0072	156	10	
32	0	9.774 7288	285	9.869 7372	440	0.130 2628	9.904 9916	156	0	28
	10	9.774 7573	284	9.869 7812	440	0.130 2188	9.904 9760	156	50	
	20	9.774 7857	284	9.869 8252	440	0.130 1748	9.904 9604	156	40	
	30	9.774 8141	284	9.869 8692	441	0.130 1308	9.904 9448	156	30	
	40	9.774 8425	284	9.869 9133	440	0.130 0867	9.904 9292	156	20	
	50	9.774 8709	284	9.869 9573	440	0.130 0427	9.904 9136	156	10	
33	0	9.774 8993	284	9.870 0013	440	0.129 9987	9.904 8980	156	0	27
	10	9.774 9277	284	9.870 0453	440	0.129 9547	9.904 8824	156	50	
	20	9.774 9561	284	9.870 0893	440	0.129 9107	9.904 8668	156	40	
	30	9.774 9845	284	9.870 1333	440	0.129 8667	9.904 8512	156	30	
	40	9.775 0129	284	9.870 1773	440	0.129 8227	9.904 8356	156	20	
	50	9.775 0413	284	9.870 2213	440	0.129 7787	9.904 8200	157	10	
34	0	9.775 0697	284	9.870 2653	440	0.129 7347	9.904 8043	156	0	26
	10	9.775 0981	283	9.870 3093	440	0.129 6907	9.904 7887	156	50	
	20	9.775 1264	284	9.870 3533	440	0.129 6467	9.904 7731	156	40	
	30	9.775 1548	284	9.870 3973	440	0.129 6027	9.904 7575	156	30	
	40	9.775 1832	284	9.870 4413	440	0.129 5587	9.904 7419	157	20	
	50	9.775 2116	283	9.870 4853	440	0.129 5147	9.904 7262	156	10	
35	0	9.775 2399	284	9.870 5293	440	0.129 4707	9.904 7106	156	0	25
	10	9.775 2683	284	9.870 5733	440	0.129 4267	9.904 6950	156	50	
	20	9.775 2967	283	9.870 6173	440	0.129 3827	9.904 6794	157	40	
	30	9.775 3250	284	9.870 6613	440	0.129 3387	9.904 6637	156	30	
	40	9.775 3534	283	9.870 7053	440	0.129 2947	9.904 6481	156	20	
	50	9.775 3817	284	9.870 7493	440	0.129 2507	9.904 6325	157	10	
36	0	9.775 4101	283	9.870 7933	440	0.129 2067	9.904 6168	156	0	24
	10	9.775 4384	284	9.870 8373	439	0.129 1627	9.904 6012	157	50	
	20	9.775 4668	283	9.870 8812	440	0.129 1188	9.904 5855	156	40	
	30	9.775 4951	284	9.870 9252	440	0.129 0748	9.904 5699	156	30	
	40	9.775 5235	283	9.870 9692	440	0.129 0308	9.904 5543	157	20	
	50	9.775 5518	283	9.871 0132	440	0.128 9868	9.904 5386	156	10	
37	0	9.775 5801	284	9.871 0572	440	0.128 9428	9.904 5230	157	0	23
	10	9.775 6085	283	9.871 1012	439	0.128 8988	9.904 5073	156	50	
	20	9.775 6368	283	9.871 1451	440	0.128 8549	9.904 4917	157	40	
	30	9.775 6651	284	9.871 1891	440	0.128 8109	9.904 4760	156	30	
	40	9.775 6935	283	9.871 2331	440	0.128 7669	9.904 4604	157	20	
	50	9.775 7218	283	9.871 2771	439	0.128 7229	9.904 4447	156	10	
38	0	9.775 7501	283	9.871 3210	440	0.128 6790	9.904 4291	157	0	22
	10	9.775 7784	283	9.871 3650	440	0.128 6350	9.904 4134	157	50	
	20	9.775 8067	283	9.871 4090	439	0.128 5910	9.904 3977	156	40	
	30	9.775 8350	283	9.871 4529	440	0.128 5471	9.904 3821	157	30	
	40	9.775 8633	283	9.871 4969	440	0.128 5031	9.904 3664	156	20	
	50	9.775 8916	283	9.871 5409	439	0.128 4591	9.904 3508	157	10	
39	0	9.775 9199	283	9.871 5848	440	0.128 4152	9.904 3351	157	0	21
	10	9.775 9482	283	9.871 6288	440	0.128 3712	9.904 3194	156	50	
	20	9.775 9765	283	9.871 6728	439	0.128 3272	9.904 3038	157	40	
	30	9.776 0048	283	9.871 7167	440	0.128 2833	9.904 2881	157	30	
	40	9.776 0331	283	9.871 7607	440	0.128 2393	9.904 2724	157	20	
	50	9.776 0614	283	9.871 8047	439	0.128 1953	9.904 2567	156	10	
40	0	9.776 0897		9.871 8486		0.128 1514	9.904 2411		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin.	d.	″	′

53°

440	
1	44.0
2	88.0
3	132.0
4	176.0
5	220.0
6	264.0
7	308.0
8	352.0
9	396.0

439	
1	43.9
2	87.8
3	131.7
4	175.6
5	219.5
6	263.4
7	307.3
8	351.2
9	395.1

284	
1	28.4
2	56.8
3	85.2
4	113.6
5	142.0
6	170.4
7	198.8
8	227.2
9	255.6

283	
1	28.3
2	56.6
3	84.9
4	113.2
5	141.5
6	169.8
7	198.1
8	226.4
9	254.7

156	
1	15.6
2	31.2
3	46.8
4	62.4
5	78.0
6	93.6
7	109.2
8	124.8
9	140.4

157	
1	15.7
2	31.4
3	47.1
4	62.8
5	78.5
6	94.2
7	109.9
8	125.6
9	141.3

36°

	440
1	44.0
2	88.0
3	132.0
4	176.0
5	220.0
6	264.0
7	308.0
8	352.0
9	396.0

	439
1	43.9
2	87.8
3	131.7
4	175.6
5	219.5
6	263.4
7	307.3
8	351.2
9	395.1

	283
1	28.3
2	56.6
3	84.9
4	113.2
5	141.5
6	169.8
7	198.1
8	226.4
9	254.7

	282
1	28.2
2	56.4
3	84.6
4	112.8
5	141.0
6	169.2
7	197.4
8	225.6
9	253.8

	156
1	15.6
2	31.2
3	46.8
4	62.4
5	78.0
6	93.6
7	109.2
8	124.8
9	140.4

	157
1	15.7
2	31.4
3	47.1
4	62.8
5	78.5
6	94.2
7	109.9
8	125.6
9	141.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.776 0897	283	9.871 8486	440	0.128 1514	9.904 2411	157	0	20
	10	9.776 1180	282	9.871 8926	439	0.128 1074	9.904 2254	157	50	
	20	9.776 1462	283	9.871 9365	440	0.128 0635	9.904 2097	157	40	
	30	9.776 1745	283	9.871 9805	439	0.128 0195	9.904 1940	156	30	
	40	9.776 2028	283	9.872 0244	440	0.127 9756	9.904 1784	157	20	
	50	9.776 2311	282	9.872 0684	439	0.127 9316	9.904 1627	157	10	
41	0	9.776 2593	283	9.872 1123	440	0.127 8877	9.904 1470	157	0	19
	10	9.776 2876	282	9.872 1563	439	0.127 8437	9.904 1313	157	50	
	20	9.776 3158	283	9.872 2002	440	0.127 7998	9.904 1156	157	40	
	30	9.776 3441	283	9.872 2442	439	0.127 7558	9.904 0999	157	30	
	40	9.776 3724	282	9.872 2881	440	0.127 7119	9.904 0842	156	20	
	50	9.776 4006	283	9.872 3321	439	0.127 6679	9.904 0686	157	10	
42	0	9.776 4289	282	9.872 3760	439	0.127 6240	9.904 0529	157	0	18
	10	9.776 4571	283	9.872 4199	440	0.127 5801	9.904 0372	157	50	
	20	9.776 4854	282	9.872 4639	439	0.127 5361	9.904 0215	157	40	
	30	9.776 5136	282	9.872 5078	440	0.127 4922	9.904 0058	157	30	
	40	9.776 5418	283	9.872 5518	439	0.127 4482	9.903 9901	157	20	
	50	9.776 5701	282	9.872 5957	439	0.127 4043	9.903 9744	157	10	
43	0	9.776 5983	282	9.872 6396	440	0.127 3604	9.903 9587	157	0	17
	10	9.776 6265	283	9.872 6836	439	0.127 3164	9.903 9430	157	50	
	20	9.776 6548	282	9.872 7275	439	0.127 2725	9.903 9273	158	40	
	30	9.776 6830	282	9.872 7714	440	0.127 2286	9.903 9115	157	30	
	40	9.776 7112	282	9.872 8154	439	0.127 1846	9.903 8958	157	20	
	50	9.776 7394	282	9.872 8593	439	0.127 1407	9.903 8801	157	10	
44	0	9.776 7676	282	9.872 9032	439	0.127 0968	9.903 8644	157	0	16
	10	9.776 7958	283	9.872 9471	440	0.127 0529	9.903 8487	157	50	
	20	9.776 8241	282	9.872 9911	439	0.127 0089	9.903 8330	157	40	
	30	9.776 8523	282	9.873 0350	439	0.126 9650	9.903 8173	157	30	
	40	9.776 8805	282	9.873 0789	439	0.126 9211	9.903 8016	158	20	
	50	9.776 9087	282	9.873 1228	440	0.126 8772	9.903 7858	157	10	
45	0	9.776 9369	282	9.873 1668	439	0.126 8332	9.903 7701	157	0	15
	10	9.776 9651	281	9.873 2107	439	0.126 7893	9.903 7544	157	50	
	20	9.776 9932	282	9.873 2546	439	0.126 7454	9.903 7387	158	40	
	30	9.777 0214	282	9.873 2985	439	0.126 7015	9.903 7229	157	30	
	40	9.777 0496	282	9.873 3424	439	0.126 6576	9.903 7072	157	20	
	50	9.777 0778	282	9.873 3863	439	0.126 6137	9.903 6915	158	10	
46	0	9.777 1060	282	9.873 4302	440	0.126 5698	9.903 6757	157	0	14
	10	9.777 1342	281	9.873 4742	439	0.126 5258	9.903 6600	157	50	
	20	9.777 1623	282	9.873 5181	439	0.126 4819	9.903 6443	158	40	
	30	9.777 1905	282	9.873 5620	439	0.126 4380	9.903 6285	157	30	
	40	9.777 2187	281	9.873 6059	439	0.126 3941	9.903 6128	157	20	
	50	9.777 2468	282	9.873 6498	439	0.126 3502	9.903 5971	158	10	
47	0	9.777 2750	282	9.873 6937	439	0.126 3063	9.903 5813	157	0	13
	10	9.777 3032	281	9.873 7376	439	0.126 2624	9.903 5656	158	50	
	20	9.777 3313	282	9.873 7815	439	0.126 2185	9.903 5498	157	40	
	30	9.777 3595	281	9.873 8254	439	0.126 1746	9.903 5341	158	30	
	40	9.777 3876	282	9.873 8693	439	0.126 1307	9.903 5183	157	20	
	50	9.777 4158	281	9.873 9132	439	0.126 0868	9.903 5026	158	10	
48	0	9.777 4439	282	9.873 9571	439	0.126 0429	9.903 4868	157	0	12
	10	9.777 4721	281	9.874 0010	439	0.125 9990	9.903 4711	158	50	
	20	9.777 5002	282	9.874 0449	439	0.125 9551	9.903 4553	157	40	
	30	9.777 5284	281	9.874 0888	439	0.125 9112	9.903 4396	158	30	
	40	9.777 5565	281	9.874 1327	439	0.125 8673	9.903 4238	157	20	
	50	9.777 5846	282	9.874 1766	438	0.125 8234	9.903 4081	158	10	
49	0	9.777 6128	281	9.874 2204	439	0.125 7796	9.903 3923	158	0	11
	10	9.777 6409	281	9.874 2643	439	0.125 7357	9.903 3765	157	50	
	20	9.777 6690	281	9.874 3082	439	0.125 6918	9.903 3608	158	40	
	30	9.777 6971	281	9.874 3521	439	0.125 6479	9.903 3450	157	30	
	40	9.777 7252	282	9.874 3960	439	0.125 6040	9.903 3293	158	20	
	50	9.777 7534	281	9.874 4399	439	0.125 5601	9.903 3135	158	10	
50	0	9.777 7815		9.874 4838		0.125 5162	9.903 2977		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

53°

36°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.777 7815	281	9.874 4838	438	0.125 5162	9.903 2977	158	0	10
	10	9.777 8096	281	9.874 5276	439	0.125 4724	9.903 2819	157	50	
	20	9.777 8377	281	9.874 5715	439	0.125 4285	9.903 2662	158	40	
	30	9.777 8658	281	9.874 6154	439	0.125 3846	9.903 2504	158	30	
	40	9.777 8939	281	9.874 6593	438	0.125 3407	9.903 2346	158	20	
	50	9.777 9220	281	9.874 7031	439	0.125 2969	9.903 2188	157	10	
51	0	9.777 9501	281	9.874 7470	439	0.125 2530	9.903 2031	158	0	9
	10	9.777 9782	281	9.874 7909	439	0.125 2091	9.903 1873	158	50	
	20	9.778 0063	281	9.874 8348	438	0.125 1652	9.903 1715	158	40	
	30	9.778 0344	280	9.874 8786	439	0.125 1214	9.903 1557	158	30	
	40	9.778 0624	281	9.874 9225	439	0.125 0775	9.903 1399	158	20	
	50	9.778 0905	281	9.874 9664	438	0.125 0336	9.903 1241	157	10	
52	0	9.778 1186	281	9.875 0102	439	0.124 9898	9.903 1084	158	0	8
	10	9.778 1467	280	9.875 0541	439	0.124 9459	9.903 0926	158	50	
	20	9.778 1747	281	9.875 0980	438	0.124 9020	9.903 0768	158	40	
	30	9.778 2028	281	9.875 1418	439	0.124 8582	9.903 0610	158	30	
	40	9.778 2309	280	9.875 1857	439	0.124 8143	9.903 0452	158	20	
	50	9.778 2589	281	9.875 2296	438	0.124 7704	9.903 0294	158	10	
53	0	9.778 2870	281	9.875 2734	439	0.124 7266	9.903 0136	158	0	7
	10	9.778 3151	280	9.875 3173	438	0.124 6827	9.902 9978	158	50	
	20	9.778 3431	281	9.875 3611	439	0.124 6389	9.902 9820	158	40	
	30	9.778 3712	280	9.875 4050	438	0.124 5950	9.902 9662	158	30	
	40	9.778 3992	281	9.875 4488	439	0.124 5512	9.902 9504	158	20	
	50	9.778 4273	280	9.875 4927	438	0.124 5073	9.902 9346	158	10	
54	0	9.778 4553	281	9.875 5365	439	0.124 4635	9.902 9188	158	0	6
	10	9.778 4834	280	9.875 5804	438	0.124 4196	9.902 9030	159	50	
	20	9.778 5114	280	9.875 6242	439	0.124 3758	9.902 8871	158	40	
	30	9.778 5394	281	9.875 6681	438	0.124 3319	9.902 8713	158	30	
	40	9.778 5675	280	9.875 7119	439	0.124 2881	9.902 8555	158	20	
	50	9.778 5955	280	9.875 7558	438	0.124 2442	9.902 8397	158	10	
55	0	9.778 6235	280	9.875 7996	439	0.124 2004	9.902 8239	158	0	5
	10	9.778 6515	281	9.875 8435	438	0.124 1565	9.902 8081	159	50	
	20	9.778 6796	280	9.875 8873	439	0.124 1127	9.902 7922	158	40	
	30	9.778 7076	280	9.875 9312	438	0.124 0688	9.902 7764	158	30	
	40	9.778 7356	280	9.875 9750	438	0.124 0250	9.902 7606	158	20	
	50	9.778 7636	280	9.876 0188	439	0.123 9812	9.902 7448	159	10	
56	0	9.778 7916	280	9.876 0627	438	0.123 9373	9.902 7289	158	0	4
	10	9.778 8196	280	9.876 1065	438	0.123 8935	9.902 7131	158	50	
	20	9.778 8476	280	9.876 1503	439	0.123 8497	9.902 6973	158	40	
	30	9.778 8756	280	9.876 1942	438	0.123 8058	9.902 6815	159	30	
	40	9.778 9036	280	9.876 2380	438	0.123 7620	9.902 6656	158	20	
	50	9.778 9316	280	9.876 2818	439	0.123 7182	9.902 6498	159	10	
57	0	9.778 9596	280	9.876 3257	438	0.123 6743	9.902 6339	158	0	3
	10	9.778 9876	280	9.876 3695	438	0.123 6305	9.902 6181	158	50	
	20	9.779 0156	280	9.876 4133	439	0.123 5867	9.902 6023	159	40	
	30	9.779 0436	280	9.876 4572	438	0.123 5428	9.902 5864	158	30	
	40	9.779 0716	280	9.876 5010	438	0.123 4990	9.902 5706	159	20	
	50	9.779 0996	279	9.876 5448	438	0.123 4552	9.902 5547	158	10	
58	0	9.779 1275	280	9.876 5886	439	0.123 4114	9.902 5389	159	0	2
	10	9.779 1555	280	9.876 6325	438	0.123 3675	9.902 5230	158	50	
	20	9.779 1835	279	9.876 6763	438	0.123 3237	9.902 5072	159	40	
	30	9.779 2114	280	9.876 7201	438	0.123 2799	9.902 4913	158	30	
	40	9.779 2394	280	9.876 7639	438	0.123 2361	9.902 4755	159	20	
	50	9.779 2674	279	9.876 8077	438	0.123 1923	9.902 4596	158	10	
59	0	9.779 2953	280	9.876 8515	439	0.123 1485	9.902 4438	159	0	1
	10	9.779 3233	279	9.876 8954	438	0.123 1046	9.902 4279	158	50	
	20	9.779 3512	280	9.876 9392	438	0.123 0608	9.902 4121	159	40	
	30	9.779 3792	279	9.876 9830	438	0.123 0170	9.902 3962	159	30	
	40	9.779 4071	280	9.877 0268	438	0.122 9732	9.902 3803	158	20	
	50	9.779 4351	279	9.877 0706	438	0.122 9294	9.902 3645	159	10	
60	0	9.779 4630		9.877 1144		0.122 8856	9.902 3486		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

53°

438	
1	43.8
2	87.6
3	131.4
4	175.2
5	219.0
6	262.8
7	306.6
8	350.4
9	394.2

281	
1	28.1
2	56.2
3	84.3
4	112.4
5	140.5
6	168.6
7	196.7
8	224.8
9	252.9

280	
1	28.0
2	56.0
3	84.0
4	112.0
5	140.0
6	168.0
7	196.0
8	224.0
9	252.0

279	
1	27.9
2	55.8
3	83.7
4	111.6
5	139.5
6	167.4
7	195.3
8	223.2
9	251.1

158	
1	15.8
2	31.6
3	47.4
4	63.2
5	79.0
6	94.8
7	110.6
8	126.4
9	142.2

159	
1	15.9
2	31.8
3	47.7
4	63.6
5	79.5
6	95.4
7	111.3
8	127.2
9	143.1

37°

'	"	Sin	d	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.779 4630	280	9.877 1144	438	0.122 8856	9.902 3486	159	0	60
	10	9.779 4910	279	9.877 1582	438	0.122 8418	9.902 3327	158	50	
	20	9.779 5189	279	9.877 2020	438	0.122 7980	9.902 3169	159	40	
	30	9.779 5468	280	9.877 2458	438	0.122 7542	9.902 3010	159	30	
	40	9.779 5748	279	9.877 2896	438	0.122 7104	9.902 2851	158	20	
	50	9.779 6027	279	9.877 3334	438	0.122 6666	9.902 2693	159	10	
1	0	9.779 6306	279	9.877 3772	438	0.122 6228	9.902 2534	159	0	59
	10	9.779 6585	280	9.877 4210	438	0.122 5790	9.902 2375	159	50	
	20	9.779 6865	279	9.877 4648	438	0.122 5352	9.902 2216	158	40	
	30	9.779 7144	279	9.877 5086	438	0.122 4914	9.902 2058	159	30	
	40	9.779 7423	279	9.877 5524	438	0.122 4476	9.902 1899	159	20	
	50	9.779 7702	279	9.877 5962	438	0.122 4038	9.902 1740	159	10	
2	0	9.779 7981	279	9.877 6400	438	0.122 3600	9.902 1581	159	0	58
	10	9.779 8260	279	9.877 6838	438	0.122 3162	9.902 1422	159	50	
	20	9.779 8539	279	9.877 7276	438	0.122 2724	9.902 1263	159	40	
	30	9.779 8818	279	9.877 7714	438	0.122 2286	9.902 1104	158	30	
	40	9.779 9097	279	9.877 8152	438	0.122 1848	9.902 0946	159	20	
	50	9.779 9376	279	9.877 8590	437	0.122 1410	9.902 0787	159	10	
3	0	9.779 9655	279	9.877 9027	438	0.122 0973	9.902 0628	159	0	57
	10	9.779 9934	279	9.877 9465	438	0.122 0535	9.902 0469	159	50	
	20	9.780 0213	279	9.877 9903	438	0.122 0097	9.902 0310	159	40	
	30	9.780 0492	278	9.878 0341	438	0.121 9659	9.902 0151	159	30	
	40	9.780 0770	279	9.878 0779	438	0.121 9221	9.901 9992	159	20	
	50	9.780 1049	279	9.878 1217	437	0.121 8783	9.901 9833	159	10	
4	0	9.780 1328	279	9.878 1654	438	0.121 8346	9.901 9674	159	0	56
	10	9.780 1607	278	9.878 2092	438	0.121 7908	9.901 9515	159	50	
	20	9.780 1885	279	9.878 2530	438	0.121 7470	9.901 9356	160	40	
	30	9.780 2164	279	9.878 2968	437	0.121 7032	9.901 9196	159	30	
	40	9.780 2443	278	9.878 3405	438	0.121 6595	9.901 9037	159	20	
	50	9.780 2721	279	9.878 3843	438	0.121 6157	9.901 8878	159	10	
5	0	9.780 3000	278	9.878 4281	438	0.121 5719	9.901 8719	159	0	55
	10	9.780 3278	279	9.878 4719	437	0.121 5281	9.901 8560	159	50	
	20	9.780 3557	279	9.878 5156	438	0.121 4844	9.901 8401	159	40	
	30	9.780 3836	278	9.878 5594	438	0.121 4406	9.901 8242	160	30	
	40	9.780 4114	278	9.878 6032	437	0.121 3968	9.901 8082	159	20	
	50	9.780 4392	279	9.878 6469	438	0.121 3531	9.901 7923	159	10	
6	0	9.780 4671	278	9.878 6907	438	0.121 3093	9.901 7764	159	0	54
	10	9.780 4949	279	9.878 7345	437	0.121 2655	9.901 7605	160	50	
	20	9.780 5228	278	9.878 7782	438	0.121 2218	9.901 7445	159	40	
	30	9.780 5506	278	9.878 8220	437	0.121 1780	9.901 7286	159	30	
	40	9.780 5784	278	9.878 8657	438	0.121 1343	9.901 7127	159	20	
	50	9.780 6062	279	9.878 9095	438	0.121 0905	9.901 6968	160	10	
7	0	9.780 6341	278	9.878 9533	437	0.121 0467	9.901 6808	159	0	53
	10	9.780 6619	278	9.878 9970	438	0.121 0030	9.901 6649	159	50	
	20	9.780 6897	278	9.879 0408	437	0.120 9592	9.901 6490	160	40	
	30	9.780 7175	278	9.879 0845	438	0.120 9155	9.901 6330	159	30	
	40	9.780 7453	279	9.879 1283	437	0.120 8717	9.901 6171	160	20	
	50	9.780 7732	278	9.879 1720	438	0.120 8280	9.901 6011	159	10	
8	0	9.780 8010	278	9.879 2158	437	0.120 7842	9.901 5852	160	0	52
	10	9.780 8288	278	9.879 2595	438	0.120 7405	9.901 5692	159	50	
	20	9.780 8566	278	9.879 3033	437	0.120 6967	9.901 5533	159	40	
	30	9.780 8844	278	9.879 3470	438	0.120 6530	9.901 5374	160	30	
	40	9.780 9122	278	9.879 3908	437	0.120 6092	9.901 5214	159	20	
	50	9.780 9400	277	9.879 4345	437	0.120 5655	9.901 5055	160	10	
9	0	9.780 9677	278	9.879 4782	438	0.120 5218	9.901 4895	159	0	51
	10	9.780 9955	278	9.879 5220	437	0.120 4780	9.901 4736	160	50	
	20	9.781 0233	278	9.879 5657	438	0.120 4343	9.901 4576	160	40	
	30	9.781 0511	278	9.879 6095	437	0.120 3905	9.901 4416	159	30	
	40	9.781 0789	278	9.879 6532	437	0.120 3468	9.901 4257	160	20	
	50	9.781 1067	277	9.879 6969	438	0.120 3031	9.901 4097	159	10	
10	0	9.781 1344		9.879 7407		0.120 2593	9.901 3938		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

52°

	438
1	43.8
2	87.6
3	131.4
4	175.2
5	219.0
6	262.8
7	306.6
8	350.4
9	394.2

	280
1	28.0
2	56.0
3	84.0
4	112.0
5	140.0
6	168.0
7	196.0
8	224.0
9	252.0

	279
1	27.9
2	55.8
3	83.7
4	111.6
5	139.5
6	167.4
7	195.3
8	223.2
9	251.1

	278
1	27.8
2	55.6
3	83.4
4	111.2
5	139.0
6	166.8
7	194.6
8	222.4
9	250.2

	158
1	15.8
2	31.6
3	47.4
4	63.2
5	79.0
6	94.8
7	110.6
8	126.4
9	142.2

	159
1	15.9
2	31.8
3	47.7
4	63.6
5	79.5
6	95.4
7	111.3
8	127.2
9	143.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.781 1344	278	9.879 7407	437	0.120 2593	9.901 3938	160	0	50
	10	9.781 1622	278	9.879 7844	437	0.120 2156	9.901 3778	160	50	
	20	9.781 1900	277	9.879 8281	438	0.120 1719	9.901 3618	159	40	
	30	9.781 2177	278	9.879 8719	437	0.120 1281	9.901 3459	160	30	
	40	9.781 2455	278	9.879 9156	437	0.120 0844	9.901 3299	160	20	
	50	9.781 2733	277	9.879 9593	438	0.120 0407	9.901 3139	159	10	
11	0	9.781 3010	278	9.880 0031	437	0.119 9969	9.901 2980	160	0	49
	10	9.781 3288	277	9.880 0468	437	0.119 9532	9.901 2820	160	50	
	20	9.781 3565	278	9.880 0905	437	0.119 9095	9.901 2660	160	40	
	30	9.781 3843	277	9.880 1342	438	0.119 8658	9.901 2500	159	30	
	40	9.781 4120	278	9.880 1780	437	0.119 8220	9.901 2341	160	20	
	50	9.781 4398	277	9.880 2217	437	0.119 7783	9.901 2181	160	10	
12	0	9.781 4675	277	9.880 2654	437	0.119 7346	9.901 2021	160	0	48
	10	9.781 4952	278	9.880 3091	438	0.119 6909	9.901 1861	160	50	
	20	9.781 5230	277	9.880 3529	437	0.119 6471	9.901 1701	160	40	
	30	9.781 5507	277	9.880 3966	437	0.119 6034	9.901 1541	159	30	
	40	9.781 5784	278	9.880 4403	437	0.119 5597	9.901 1382	160	20	
	50	9.781 6062	277	9.880 4840	437	0.119 5160	9.901 1222	160	10	
13	0	9.781 6339	277	9.880 5277	437	0.119 4723	9.901 1062	160	0	47
	10	9.781 6616	277	9.880 5714	437	0.119 4286	9.901 0902	160	50	
	20	9.781 6893	277	9.880 6151	438	0.119 3849	9.901 0742	160	40	
	30	9.781 7170	278	9.880 6589	437	0.119 3411	9.901 0582	160	30	
	40	9.781 7448	277	9.880 7026	437	0.119 2974	9.901 0422	160	20	
	50	9.781 7725	277	9.880 7463	437	0.119 2537	9.901 0262	160	10	
14	0	9.781 8002	277	9.880 7900	437	0.119 2100	9.901 0102	160	0	46
	10	9.781 8279	277	9.880 8337	437	0.119 1663	9.900 9942	160	50	
	20	9.781 8556	277	9.880 8774	437	0.119 1226	9.900 9782	160	40	
	30	9.781 8833	277	9.880 9211	437	0.119 0789	9.900 9622	160	30	
	40	9.781 9110	277	9.880 9648	437	0.119 0352	9.900 9462	160	20	
	50	9.781 9387	277	9.881 0085	437	0.118 9915	9.900 9302	160	10	
15	0	9.781 9664	276	9.881 0522	437	0.118 9478	9.900 9142	161	0	45
	10	9.781 9940	277	9.881 0959	437	0.118 9041	9.900 8981	160	50	
	20	9.782 0217	277	9.881 1396	437	0.118 8604	9.900 8821	160	40	
	30	9.782 0494	277	9.881 1833	437	0.118 8167	9.900 8661	160	30	
	40	9.782 0771	277	9.881 2270	437	0.118 7730	9.900 8501	160	20	
	50	9.782 1048	276	9.881 2707	437	0.118 7293	9.900 8341	160	10	
16	0	9.782 1324	277	9.881 3144	437	0.118 6856	9.900 8181	161	0	44
	10	9.782 1601	277	9.881 3581	437	0.118 6419	9.900 8020	160	50	
	20	9.782 1878	276	9.881 4018	437	0.118 5982	9.900 7860	160	40	
	30	9.782 2154	277	9.881 4455	436	0.118 5545	9.900 7700	160	30	
	40	9.782 2431	277	9.881 4891	437	0.118 5109	9.900 7540	161	20	
	50	9.782 2708	276	9.881 5328	437	0.118 4672	9.900 7379	160	10	
17	0	9.782 2984	277	9.881 5765	437	0.118 4235	9.900 7219	160	0	43
	10	9.782 3261	276	9.881 6202	437	0.118 3798	9.900 7059	160	50	
	20	9.782 3537	277	9.881 6639	437	0.118 3361	9.900 6899	161	40	
	30	9.782 3814	276	9.881 7076	436	0.118 2924	9.900 6738	160	30	
	40	9.782 4090	277	9.881 7512	437	0.118 2488	9.900 6578	161	20	
	50	9.782 4367	276	9.881 7949	437	0.118 2051	9.900 6417	160	10	
18	0	9.782 4643	276	9.881 8386	437	0.118 1614	9.900 6257	160	0	42
	10	9.782 4919	277	9.881 8823	437	0.118 1177	9.900 6097	161	50	
	20	9.782 5196	276	9.881 9260	436	0.118 0740	9.900 5936	160	40	
	30	9.782 5472	276	9.881 9696	437	0.118 0304	9.900 5776	161	30	
	40	9.782 5748	277	9.882 0133	437	0.117 9867	9.900 5615	160	20	
	50	9.782 6025	276	9.882 0570	437	0.117 9430	9.900 5455	161	10	
19	0	9.782 6301	276	9.882 1007	436	0.117 8993	9.900 5294	160	0	41
	10	9.782 6577	276	9.882 1443	437	0.117 8557	9.900 5134	161	50	
	20	9.782 6853	276	9.882 1880	437	0.117 8120	9.900 4973	160	40	
	30	9.782 7129	277	9.882 2317	436	0.117 7683	9.900 4813	161	30	
	40	9.782 7406	276	9.882 2753	437	0.117 7247	9.900 4652	160	20	
	50	9.782 7682	276	9.882 3190	437	0.117 6810	9.900 4492	161	10	
20	0	9.782 7958		9.882 3627		0.117 6373	9.900 4331		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	437
1	43.7
2	87.4
3	131.1
4	174.8
5	218.5
6	262.2
7	305.9
8	349.6
9	393.3

	436
1	43.6
2	87.2
3	130.8
4	174.4
5	218.0
6	261.6
7	305.2
8	348.8
9	392.4

	277
1	27.7
2	55.4
3	83.1
4	110.8
5	138.5
6	166.2
7	193.9
8	221.6
9	249.3

	276
1	27.6
2	55.2
3	82.8
4	110.4
5	138.0
6	165.6
7	193.2
8	220.8
9	248.4

	160
1	16.0
2	32.0
3	48.0
4	64.0
5	80.0
6	96.0
7	112.0
8	128.0
9	144.0

	161
1	16.1
2	32.2
3	48.3
4	64.4
5	80.5
6	96.6
7	112.7
8	128.8
9	144.9

37°

437	
1	43.7
2	87.4
3	131.1
4	174.8
5	218.5
6	262.2
7	305.9
8	349.6
9	393.3

436	
1	43.6
2	87.2
3	130.8
4	174.4
5	218.0
6	261.6
7	305.2
8	348.8
9	392.4

276	
1	27.6
2	55.2
3	82.8
4	110.4
5	138.0
6	165.6
7	93.2
8	20.8
9	48.4

275	
1	27.5
2	55.0
3	82.5
4	110.0
5	137.5
6	165.0
7	192.5
8	220.0
9	247.5

160	
1	16.0
2	32.0
3	48.0
4	64.0
5	80.0
6	96.0
7	112.0
8	128.0
9	144.0

161	
1	16.1
2	32.2
3	48.3
4	64.4
5	80.5
6	96.6
7	112.7
8	128.8
9	144.9

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.782 7958	276	9.882 3627	436	0.117 6373	9.900 4331	160	0	40
	10	9.782 8234	276	9.882 4063	437	0.117 5937	9.900 4171	161	50	
	20	9.782 8510	276	9.882 4500	437	0.117 5500	9.900 4010	161	40	
	30	9.782 8786	276	9.882 4937	436	0.117 5063	9.900 3849	160	30	
	40	9.782 9062	276	9.882 5373	437	0.117 4627	9.900 3689	161	20	
	50	9.782 9338	276	9.882 5810	436	0.117 4190	9.900 3528	161	10	
21	0	9.782 9614	275	9.882 6246	437	0.117 3754	9.900 3367	160	0	39
	10	9.782 9889	276	9.882 6683	436	0.117 3317	9.900 3207	161	50	
	20	9.783 0165	276	9.882 7119	437	0.117 2881	9.900 3046	161	40	
	30	9.783 0441	276	9.882 7556	437	0.117 2444	9.900 2885	161	30	
	40	9.783 0717	276	9.882 7993	436	0.117 2007	9.900 2724	160	20	
	50	9.783 0993	275	9.882 8429	437	0.117 1571	9.900 2564	161	10	
22	0	9.783 1268	276	9.882 8866	436	0.117 1134	9.900 2403	161	0	38
	10	9.783 1544	276	9.882 9302	437	0.117 0698	9.900 2242	161	50	
	20	9.783 1820	275	9.882 9739	436	0.117 0261	9.900 2081	161	40	
	30	9.783 2095	276	9.883 0175	437	0.116 9825	9.900 1920	160	30	
	40	9.783 2371	276	9.883 0612	436	0.116 9388	9.900 1760	161	20	
	50	9.783 2647	275	9.883 1048	436	0.116 8952	9.900 1599	161	10	
23	0	9.783 2922	276	9.883 1484	437	0.116 8516	9.900 1438	161	0	37
	10	9.783 3198	275	9.883 1921	436	0.116 8079	9.900 1277	161	50	
	20	9.783 3473	276	9.883 2357	437	0.116 7643	9.900 1116	161	40	
	30	9.783 3749	275	9.883 2794	436	0.116 7206	9.900 0955	161	30	
	40	9.783 4024	276	9.883 3230	436	0.116 6770	9.900 0794	161	20	
	50	9.783 4300	275	9.883 3666	437	0.116 6334	9.900 0633	161	10	
24	0	9.783 4575	276	9.883 4103	436	0.116 5897	9.900 0472	161	0	36
	10	9.783 4851	275	9.883 4539	437	0.116 5461	9.900 0311	161	50	
	20	9.783 5126	275	9.883 4976	436	0.116 5024	9.900 0150	161	40	
	30	9.783 5401	275	9.883 5412	436	0.116 4588	9.899 9989	161	30	
	40	9.783 5676	276	9.883 5848	437	0.116 4152	9.899 9828	161	20	
	50	9.783 5952	275	9.883 6285	436	0.116 3715	9.899 9667	161	10	
25	0	9.783 6227	275	9.883 6721	436	0.116 3279	9.899 9506	161	0	35
	10	9.783 6502	275	9.883 7157	436	0.116 2843	9.899 9345	161	50	
	20	9.783 6777	276	9.883 7593	437	0.116 2407	9.899 9184	161	40	
	30	9.783 7053	275	9.883 8030	436	0.116 1970	9.899 9023	161	30	
	40	9.783 7328	275	9.883 8466	436	0.116 1534	9.899 8862	161	20	
	50	9.783 7603	275	9.883 8902	436	0.116 1098	9.899 8701	162	10	
26	0	9.783 7878	275	9.883 9338	437	0.116 0662	9.899 8539	161	0	34
	10	9.783 8153	275	9.883 9775	436	0.116 0225	9.899 8378	161	50	
	20	9.783 8428	275	9.884 0211	436	0.115 9789	9.899 8217	161	40	
	30	9.783 8703	275	9.884 0647	436	0.115 9353	9.899 8056	161	30	
	40	9.783 8978	275	9.884 1083	436	0.115 8917	9.899 7895	162	20	
	50	9.783 9253	275	9.884 1519	437	0.115 8481	9.899 7733	161	10	
27	0	9.783 9528	275	9.884 1956	436	0.115 8044	9.899 7572	161	0	33
	10	9.783 9803	274	9.884 2392	436	0.115 7608	9.899 7411	162	50	
	20	9.784 0077	275	9.884 2828	436	0.115 7172	9.899 7249	161	40	
	30	9.784 0352	275	9.884 3264	436	0.115 6736	9.899 7088	161	30	
	40	9.784 0627	275	9.884 3700	436	0.115 6300	9.899 6927	162	20	
	50	9.784 0902	275	9.884 4136	436	0.115 5864	9.899 6765	161	10	
28	0	9.784 1177	274	9.884 4572	436	0.115 5428	9.899 6604	161	0	32
	10	9.784 1451	275	9.884 5008	437	0.115 4992	9.899 6443	162	50	
	20	9.784 1726	275	9.884 5445	436	0.115 4555	9.899 6281	161	40	
	30	9.784 2001	274	9.884 5881	436	0.115 4119	9.899 6120	161	30	
	40	9.784 2275	275	9.884 6317	436	0.115 3683	9.899 5959	162	20	
	50	9.784 2550	274	9.884 6753	436	0.115 3247	9.899 5797	161	10	
29	0	9.784 2824	275	9.884 7189	436	0.115 2811	9.899 5636	162	0	31
	10	9.784 3099	274	9.884 7625	436	0.115 2375	9.899 5474	161	50	
	20	9.784 3373	275	9.884 8061	436	0.115 1939	9.899 5313	162	40	
	30	9.784 3648	274	9.884 8497	436	0.115 1503	9.899 5151	161	30	
	40	9.784 3922	275	9.884 8933	436	0.115 1067	9.899 4990	162	20	
	50	9.784 4197	274	9.884 9369	436	0.115 0631	9.899 4828	161	10	
30	0	9.784 4471		9.884 9805		0.115 0195	9.899 4667		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

52°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.784 4471	275	9.884 9805	436	0.115 0195	9.899 4667	162	0	30
	10	9.784 4746	274	9.885 0241	436	0.114 9759	9.899 4505	162	50	
	20	9.784 5020	274	9.885 0677	436	0.114 9323	9.899 4343	161	40	
	30	9.784 5294	275	9.885 1113	435	0.114 8887	9.899 4182	162	30	
	40	9.784 5569	274	9.885 1548	436	0.114 8452	9.899 4020	161	20	
	50	9.784 5843	274	9.885 1984	436	0.114 8016	9.899 3859	162	10	
31	0	9.784 6117	274	9.885 2420	436	0.114 7580	9.899 3697	162	0	29
	10	9.784 6391	275	9.885 2856	436	0.114 7144	9.899 3535	161	50	
	20	9.784 6666	274	9.885 3292	436	0.114 6708	9.899 3374	162	40	
	30	9.784 6940	274	9.885 3728	436	0.114 6272	9.899 3212	162	30	
	40	9.784 7214	274	9.885 4164	436	0.114 5836	9.899 3050	162	20	
	50	9.784 7488	274	9.885 4600	435	0.114 5400	9.899 2888	161	10	
32	0	9.784 7762	274	9.885 5035	436	0.114 4965	9.899 2727	162	0	28
	10	9.784 8036	274	9.885 5471	436	0.114 4529	9.899 2565	162	50	
	20	9.784 8310	274	9.885 5907	436	0.114 4093	9.899 2403	162	40	
	30	9.784 8584	274	9.885 6343	436	0.114 3657	9.899 2241	162	30	
	40	9.784 8858	274	9.885 6779	435	0.114 3221	9.899 2079	161	20	
	50	9.784 9132	274	9.885 7214	436	0.114 2786	9.899 1918	162	10	
33	0	9.784 9406	274	9.885 7650	436	0.114 2350	9.899 1756	162	0	27
	10	9.784 9680	274	9.885 8086	436	0.114 1914	9.899 1594	162	50	
	20	9.784 9954	274	9.885 8522	435	0.114 1478	9.899 1432	162	40	
	30	9.785 0228	273	9.885 8957	436	0.114 1043	9.899 1270	162	30	
	40	9.785 0501	274	9.885 9393	436	0.114 0607	9.899 1108	162	20	
	50	9.785 0775	274	9.885 9829	435	0.114 0171	9.899 0946	162	10	
34	0	9.785 1049	274	9.886 0264	436	0.113 9736	9.899 0784	162	0	26
	10	9.785 1323	273	9.886 0700	436	0.113 9300	9.899 0622	162	50	
	20	9.785 1596	274	9.886 1136	436	0.113 8864	9.899 0460	162	40	
	30	9.785 1870	274	9.886 1572	435	0.113 8428	9.899 0298	162	30	
	40	9.785 2144	273	9.886 2007	436	0.113 7993	9.899 0136	162	20	
	50	9.785 2417	274	9.886 2443	435	0.113 7557	9.898 9974	162	10	
35	0	9.785 2691	273	9.886 2878	436	0.113 7122	9.898 9812	162	0	25
	10	9.785 2964	274	9.886 3314	436	0.113 6686	9.898 9650	162	50	
	20	9.785 3238	273	9.886 3750	435	0.113 6250	9.898 9488	162	40	
	30	9.785 3511	274	9.886 4185	436	0.113 5815	9.898 9326	162	30	
	40	9.785 3785	273	9.886 4621	435	0.113 5379	9.898 9164	162	20	
	50	9.785 4058	274	9.886 5056	436	0.113 4944	9.898 9002	162	10	
36	0	9.785 4332	273	9.886 5492	435	0.113 4508	9.898 8840	162	0	24
	10	9.785 4605	273	9.886 5927	436	0.113 4073	9.898 8678	163	50	
	20	9.785 4878	274	9.886 6363	436	0.113 3637	9.898 8515	162	40	
	30	9.785 5152	273	9.886 6799	435	0.113 3201	9.898 8353	162	30	
	40	9.785 5425	273	9.886 7234	436	0.113 2766	9.898 8191	162	20	
	50	9.785 5698	274	9.886 7670	435	0.113 2330	9.898 8029	162	10	
37	0	9.785 5972	273	9.886 8105	436	0.113 1895	9.898 7867	163	0	23
	10	9.785 6245	273	9.886 8541	435	0.113 1459	9.898 7704	162	50	
	20	9.785 6518	273	9.886 8976	435	0.113 1024	9.898 7542	162	40	
	30	9.785 6791	273	9.886 9411	436	0.113 0589	9.898 7380	162	30	
	40	9.785 7064	274	9.886 9847	435	0.113 0153	9.898 7218	163	20	
	50	9.785 7338	273	9.887 0282	436	0.112 9718	9.898 7055	162	10	
38	0	9.785 7611	273	9.887 0718	435	0.112 9282	9.898 6893	162	0	22
	10	9.785 7884	273	9.887 1153	436	0.112 8847	9.898 6731	163	50	
	20	9.785 8157	273	9.887 1589	435	0.112 8411	9.898 6568	162	40	
	30	9.785 8430	273	9.887 2024	435	0.112 7976	9.898 6406	163	30	
	40	9.785 8703	273	9.887 2459	436	0.112 7541	9.898 6243	162	20	
	50	9.785 8976	273	9.887 2895	435	0.112 7105	9.898 6081	162	10	
39	0	9.785 9249	273	9.887 3330	435	0.112 6670	9.898 5919	163	0	21
	10	9.785 9522	272	9.887 3765	436	0.112 6235	9.898 5756	162	50	
	20	9.785 9794	273	9.887 4201	435	0.112 5799	9.898 5594	163	40	
	30	9.786 0067	273	9.887 4636	435	0.112 5364	9.898 5431	162	30	
	40	9.786 0340	273	9.887 5071	436	0.112 4929	9.898 5269	163	20	
	50	9.786 0613	273	9.887 5507	435	0.112 4493	9.898 5106	162	10	
40	0	9.786 0886		9.887 5942		0.112 4058	9.898 4944		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

435	
1	43.5
2	87.0
3	130.5
4	174.0
5	217.5
6	261.0
7	304.5
8	348.0
9	391.5

274	
1	27.4
2	54.8
3	82.2
4	109.6
5	137.0
6	164.4
7	191.8
8	219.2
9	246.6

273	
1	27.3
2	54.6
3	81.9
4	109.2
5	136.5
6	163.8
7	191.1
8	218.4
9	245.7

272	
1	27.2
2	54.4
3	81.6
4	108.8
5	136.0
6	163.2
7	190.4
8	217.6
9	244.8

162	
1	16.2
2	32.4
3	48.6
4	64.8
5	81.0
6	97.2
7	113.4
8	129.6
9	145.8

163	
1	16.3
2	32.6
3	48.9
4	65.2
5	81.5
6	97.8
7	114.1
8	130.4
9	146.7

37°

	436
1	43.6
2	87.2
3	130.8
4	174.4
5	218.0
6	261.6
7	305.2
8	348.8
9	392.4

	435
1	43.5
2	87.0
3	130.5
4	174.0
5	217.5
6	261.0
7	304.5
8	348.0
9	391.5

	273
1	27.3
2	54.6
3	81.9
4	109.2
5	136.5
6	163.8
7	191.1
8	218.4
9	245.7

	272
1	27.2
2	54.4
3	81.6
4	108.8
5	136.0
6	163.2
7	190.4
8	217.6
9	244.8

	162
1	16.2
2	32.4
3	48.6
4	64.8
5	81.0
6	97.2
7	113.4
8	129.6
9	145.8

	163
1	16.3
2	32.6
3	48.9
4	65.2
5	81.5
6	97.8
7	114.1
8	130.4
9	146.7

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.786 0886	272	9.887 5942	435	0.112 4058	9.898 4944	163	0	20
	10	9.786 1158	273	9.887 6377	436	0.112 3623	9.898 4781	163	50	
	20	9.786 1431	273	9.887 6813	435	0.112 3187	9.898 4618	162	40	
	30	9.786 1704	272	9.887 7248	435	0.112 2752	9.898 4456	163	30	
	40	9.786 1976	273	9.887 7683	435	0.112 2317	9.898 4293	162	20	
	50	9.786 2249	273	9.887 8118	436	0.112 1882	9.898 4131	163	10	
41	0	9.786 2522	272	9.887 8554	435	0.112 1446	9.898 3968	163	0	19
	10	9.786 2794	273	9.887 8989	435	0.112 1011	9.898 3805	162	50	
	20	9.786 3067	272	9.887 9424	435	0.112 0576	9.898 3643	163	40	
	30	9.786 3339	273	9.887 9859	435	0.112 0141	9.898 3480	163	30	
	40	9.786 3612	272	9.888 0294	436	0.111 9706	9.898 3317	162	20	
	50	9.786 3884	273	9.888 0730	435	0.111 9270	9.898 3155	163	10	
42	0	9.786 4157	272	9.888 1165	435	0.111 8835	9.898 2992	163	0	18
	10	9.786 4429	272	9.888 1600	435	0.111 8400	9.898 2829	163	50	
	20	9.786 4701	273	9.888 2035	435	0.111 7965	9.898 2666	162	40	
	30	9.786 4974	272	9.888 2470	435	0.111 7530	9.898 2504	163	30	
	40	9.786 5246	272	9.888 2905	435	0.111 7095	9.898 2341	163	20	
	50	9.786 5518	273	9.888 3340	435	0.111 6660	9.898 2178	163	10	
43	0	9.786 5791	272	9.888 3775	436	0.111 6225	9.898 2015	163	0	17
	10	9.786 6063	272	9.888 4211	435	0.111 5789	9.898 1852	162	50	
	20	9.786 6335	272	9.888 4646	435	0.111 5354	9.898 1690	163	40	
	30	9.786 6607	273	9.888 5081	435	0.111 4919	9.898 1527	163	30	
	40	9.786 6880	272	9.888 5516	435	0.111 4484	9.898 1364	163	20	
	50	9.786 7152	272	9.888 5951	435	0.111 4049	9.898 1201	163	10	
44	0	9.786 7424	272	9.888 6386	435	0.111 3614	9.898 1038	163	0	16
	10	9.786 7696	272	9.888 6821	435	0.111 3179	9.898 0875	163	50	
	20	9.786 7968	272	9.888 7256	435	0.111 2744	9.898 0712	163	40	
	30	9.786 8240	272	9.888 7691	435	0.111 2309	9.898 0549	163	30	
	40	9.786 8512	272	9.888 8126	435	0.111 1874	9.898 0386	163	20	
	50	9.786 8784	272	9.888 8561	435	0.111 1439	9.898 0223	163	10	
45	0	9.786 9056	272	9.888 8996	435	0.111 1004	9.898 0060	163	0	15
	10	9.786 9328	272	9.888 9431	435	0.111 0569	9.897 9897	163	50	
	20	9.786 9600	272	9.888 9866	435	0.111 0134	9.897 9734	163	40	
	30	9.786 9872	271	9.889 0301	434	0.110 9699	9.897 9571	163	30	
	40	9.787 0143	272	9.889 0735	435	0.110 9265	9.897 9408	163	20	
	50	9.787 0415	272	9.889 1170	435	0.110 8830	9.897 9245	163	10	
46	0	9.787 0687	272	9.889 1605	435	0.110 8395	9.897 9082	163	0	14
	10	9.787 0959	271	9.889 2040	435	0.110 7960	9.897 8919	164	50	
	20	9.787 1230	272	9.889 2475	435	0.110 7525	9.897 8755	163	40	
	30	9.787 1502	272	9.889 2910	435	0.110 7090	9.897 8592	163	30	
	40	9.787 1774	271	9.889 3345	435	0.110 6655	9.897 8429	163	20	
	50	9.787 2045	272	9.889 3780	434	0.110 6220	9.897 8266	163	10	
47	0	9.787 2317	272	9.889 4214	435	0.110 5786	9.897 8103	164	0	13
	10	9.787 2589	271	9.889 4649	435	0.110 5351	9.897 7939	163	50	
	20	9.787 2860	272	9.889 5084	435	0.110 4916	9.897 7776	163	40	
	30	9.787 3132	271	9.889 5519	435	0.110 4481	9.897 7613	163	30	
	40	9.787 3403	272	9.889 5954	434	0.110 4046	9.897 7450	164	20	
	50	9.787 3675	271	9.889 6388	435	0.110 3612	9.897 7286	163	10	
48	0	9.787 3946	272	9.889 6823	435	0.110 3177	9.897 7123	163	0	12
	10	9.787 4218	271	9.889 7258	435	0.110 2742	9.897 6960	164	50	
	20	9.787 4489	271	9.889 7693	434	0.110 2307	9.897 6796	163	40	
	30	9.787 4760	272	9.889 8127	435	0.110 1873	9.897 6633	163	30	
	40	9.787 5032	271	9.889 8562	435	0.110 1438	9.897 6470	164	20	
	50	9.787 5303	271	9.889 8997	435	0.110 1003	9.897 6306	163	10	
49	0	9.787 5574	272	9.889 9432	434	0.110 0568	9.897 6143	164	0	11
	10	9.787 5846	271	9.889 9866	435	0.110 0134	9.897 5979	163	50	
	20	9.787 6117	271	9.890 0301	435	0.109 9699	9.897 5816	164	40	
	30	9.787 6388	271	9.890 0736	434	0.109 9264	9.897 5652	163	30	
	40	9.787 6659	271	9.890 1170	435	0.109 8830	9.897 5489	164	20	
	50	9.787 6930	272	9.890 1605	435	0.109 8395	9.897 5325	163	10	
50	0	9.787 7202		9.890 2040		0.109 7960	9.897 5162		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

52°

′	″	Sin.	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.787 7202	271	9.890 2040	434	0.109 7960	9.897 5162	164	0	10
	10	9.787 7473	271	9.890 2474	435	0.109 7526	9.897 4998	163	50	
	20	9.787 7744	271	9.890 2909	434	0.109 7091	9.897 4835	164	40	
	30	9.787 8015	271	9.890 3343	435	0.109 6657	9.897 4671	163	30	
	40	9.787 8286	271	9.890 3778	435	0.109 6222	9.897 4508	164	20	
	50	9.787 8557	271	9.890 4213	434	0.109 5787	9.897 4344	163	10	
51	0	9.787 8828	271	9.890 4647	435	0.109 5353	9.897 4181	164	0	9
	10	9.787 9099	271	9.890 5082	434	0.109 4918	9.897 4017	164	50	
	20	9.787 9370	270	9.890 5516	435	0.109 4484	9.897 3853	163	40	
	30	9.787 9640	271	9.890 5951	434	0.109 4049	9.897 3690	164	30	
	40	9.787 9911	271	9.890 6385	435	0.109 3615	9.897 3526	164	20	
	50	9.788 0182	271	9.890 6820	434	0.109 3180	9.897 3362	163	10	
52	0	9.788 0453	271	9.890 7254	435	0.109 2746	9.897 3199	164	0	8
	10	9.788 0724	271	9.890 7689	434	0.109 2311	9.897 3035	164	50	
	20	9.788 0995	270	9.890 8123	435	0.109 1877	9.897 2871	164	40	
	30	9.788 1265	271	9.890 8558	434	0.109 1442	9.897 2707	163	30	
	40	9.788 1536	271	9.890 8992	435	0.109 1008	9.897 2544	164	20	
	50	9.788 1807	270	9.890 9427	434	0.109 0573	9.897 2380	164	10	
53	0	9.788 2077	271	9.890 9861	435	0.109 0139	9.897 2216	164	0	7
	10	9.788 2348	270	9.891 0296	434	0.108 9704	9.897 2052	164	50	
	20	9.788 2618	271	9.891 0730	435	0.108 9270	9.897 1888	164	40	
	30	9.788 2889	271	9.891 1165	434	0.108 8835	9.897 1724	163	30	
	40	9.788 3160	270	9.891 1599	434	0.108 8401	9.897 1561	164	20	
	50	9.788 3430	271	9.891 2033	435	0.108 7967	9.897 1397	164	10	
54	0	9.788 3701	270	9.891 2468	434	0.108 7532	9.897 1233	164	0	6
	10	9.788 3971	270	9.891 2902	434	0.108 7098	9.897 1069	164	50	
	20	9.788 4241	271	9.891 3336	435	0.108 6664	9.897 0905	164	40	
	30	9.788 4512	270	9.891 3771	434	0.108 6229	9.897 0741	164	30	
	40	9.788 4782	271	9.891 4205	434	0.108 5795	9.897 0577	164	20	
	50	9.788 5053	270	9.891 4639	435	0.108 5361	9.897 0413	164	10	
55	0	9.788 5323	270	9.891 5074	434	0.108 4926	9.897 0249	164	0	5
	10	9.788 5593	270	9.891 5508	434	0.108 4492	9.897 0085	164	50	
	20	9.788 5863	271	9.891 5942	435	0.108 4058	9.896 9921	164	40	
	30	9.788 6134	270	9.891 6377	434	0.108 3623	9.896 9757	164	30	
	40	9.788 6404	270	9.891 6811	434	0.108 3189	9.896 9593	164	20	
	50	9.788 6674	270	9.891 7245	434	0.108 2755	9.896 9429	164	10	
56	0	9.788 6944	270	9.891 7679	435	0.108 2321	9.896 9265	164	0	4
	10	9.788 7214	270	9.891 8114	434	0.108 1886	9.896 9101	165	50	
	20	9.788 7484	270	9.891 8548	434	0.108 1452	9.896 8936	164	40	
	30	9.788 7754	271	9.891 8982	434	0.108 1018	9.896 8772	164	30	
	40	9.788 8025	270	9.891 9416	435	0.108 0584	9.896 8608	164	20	
	50	9.788 8295	270	9.891 9851	434	0.108 0149	9.896 8444	164	10	
57	0	9.788 8565	269	9.892 0285	434	0.107 9715	9.896 8280	164	0	3
	10	9.788 8834	270	9.892 0719	434	0.107 9281	9.896 8116	165	50	
	20	9.788 9104	270	9.892 1153	434	0.107 8847	9.896 7951	164	40	
	30	9.788 9374	270	9.892 1587	434	0.107 8413	9.896 7787	164	30	
	40	9.788 9644	270	9.892 2021	435	0.107 7979	9.896 7623	164	20	
	50	9.788 9914	270	9.892 2456	434	0.107 7544	9.896 7459	165	10	
58	0	9.789 0184	270	9.892 2890	434	0.107 7110	9.896 7294	164	0	2
	10	9.789 0454	269	9.892 3324	434	0.107 6676	9.896 7130	164	50	
	20	9.789 0723	270	9.892 3758	434	0.107 6242	9.896 6966	165	40	
	30	9.789 0993	270	9.892 4192	434	0.107 5808	9.896 6801	164	30	
	40	9.789 1263	270	9.892 4626	434	0.107 5374	9.896 6637	164	20	
	50	9.789 1533	269	9.892 5060	434	0.107 4940	9.896 6473	165	10	
59	0	9.789 1802	270	9.892 5494	434	0.107 4506	9.896 6308	164	0	1
	10	9.789 2072	270	9.892 5928	434	0.107 4072	9.896 6144	165	50	
	20	9.789 2342	269	9.892 6362	434	0.107 3638	9.896 5979	164	40	
	30	9.789 2611	270	9.892 6796	434	0.107 3204	9.896 5815	165	30	
	40	9.789 2881	269	9.892 7230	434	0.107 2770	9.896 5650	164	20	
	50	9.789 3150	270	9.892 7664	434	0.107 2336	9.896 5486	165	10	
60	0	9.789 3420		9.892 8098		0.107 1902	9.896 5321		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

52°

	434
1	43.4
2	86.8
3	130.2
4	173.6
5	217.0
6	260.4
7	303.8
8	347.2
9	390.6

	271
1	27.1
2	54.2
3	81.3
4	108.4
5	135.5
6	162.6
7	189.7
8	216.8
9	243.9

	270
1	27.0
2	54.0
3	81.0
4	108.0
5	135.0
6	162.0
7	189.0
8	216.0
9	243.0

	269
1	26.9
2	53.8
3	80.7
4	107.6
5	134.5
6	161.4
7	188.3
8	215.2
9	242.1

	164
1	16.4
2	32.8
3	49.2
4	65.6
5	82.0
6	98.4
7	114.8
8	131.2
9	147.6

	165
1	16.5
2	33.0
3	49.5
4	66.0
5	82.5
6	99.0
7	115.5
8	132.0
0	148.5

38°

	434
1	43.4
2	86.8
3	130.2
4	173.6
5	217.0
6	260.4
7	303.8
8	347.2
9	390.6

	270
1	27.0
2	54.0
3	81.0
4	108.0
5	135.0
6	162.0
7	189.0
8	216.0
9	243.0

	269
1	26.9
2	53.8
3	80.7
4	107.6
5	134.5
6	161.4
7	188.3
8	215.2
9	242.1

	268
1	26.8
2	53.6
3	80.4
4	107.2
5	134.0
6	160.8
7	187.6
8	214.4
9	241.2

	164
1	16.4
2	32.8
3	49.2
4	65.6
5	82.0
6	98.4
7	114.8
8	131.2
9	147.6

	165
1	16.5
2	33.0
3	49.5
4	66.0
5	82.5
6	99.0
7	115.5
8	132.0
9	148.5

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.789 3420	269	9.892 8098	434	0.107 1902	9.896 5321	164	0	60
	10	9.789 3689	270	9.892 8532	434	0.107 1468	9.896 5157	165	50	
	20	9.789 3959	269	9.892 8966	434	0.107 1034	9.896 4992	164	40	
	30	9.789 4228	270	9.892 9400	434	0.107 0600	9.896 4828	165	30	
	40	9.789 4498	269	9.892 9834	434	0.107 0166	9.896 4663	164	20	
	50	9.789 4767	269	9.893 0268	434	0.106 9732	9.896 4499	165	10	
1	0	9.789 5036	270	9.893 0702	434	0.106 9298	9.896 4334	164	0	59
	10	9.789 5306	269	9.893 1136	434	0.106 8864	9.896 4170	165	50	
	20	9.789 5575	269	9.893 1570	434	0.106 8430	9.896 4005	165	40	
	30	9.789 5844	269	9.893 2004	434	0.106 7996	9.896 3840	164	30	
	40	9.789 6113	270	9.893 2438	434	0.106 7562	9.896 3676	165	20	
	50	9.789 6383	269	9.893 2872	434	0.106 7128	9.896 3511	165	10	
2	0	9.789 6652	269	9.893 3306	433	0.106 6694	9.896 3346	164	0	58
	10	9.789 6921	269	9.893 3739	434	0.106 6261	9.896 3182	165	50	
	20	9.789 7190	269	9.893 4173	434	0.106 5827	9.896 3017	165	40	
	30	9.789 7459	269	9.893 4607	434	0.106 5393	9.896 2852	165	30	
	40	9.789 7728	269	9.893 5041	434	0.106 4959	9.896 2687	164	20	
	50	9.789 7997	269	9.893 5475	434	0.106 4525	9.896 2523	165	10	
3	0	9.789 8266	269	9.893 5909	433	0.106 4091	9.896 2358	165	0	57
	10	9.789 8535	269	9.893 6342	434	0.106 3658	9.896 2193	165	50	
	20	9.789 8804	269	9.893 6776	434	0.106 3224	9.896 2028	165	40	
	30	9.789 9073	269	9.893 7210	434	0.106 2790	9.896 1863	165	30	
	40	9.789 9342	269	9.893 7644	433	0.106 2356	9.896 1698	164	20	
	50	9.789 9611	269	9.893 8077	434	0.106 1923	9.896 1534	165	10	
4	0	9.789 9880	269	9.893 8511	434	0.106 1489	9.896 1369	165	0	56
	10	9.790 0149	269	9.893 8945	434	0.106 1055	9.896 1204	165	50	
	20	9.790 0418	268	9.893 9379	433	0.106 0621	9.896 1039	165	40	
	30	9.790 0686	269	9.893 9812	434	0.106 0188	9.896 0874	165	30	
	40	9.790 0955	269	9.894 0246	434	0.105 9754	9.896 0709	165	20	
	50	9.790 1224	269	9.894 0680	434	0.105 9320	9.896 0544	165	10	
5	0	9.790 1493	268	9.894 1114	433	0.105 8886	9.896 0379	165	0	55
	10	9.790 1761	269	9.894 1547	434	0.105 8453	9.896 0214	165	50	
	20	9.790 2030	268	9.894 1981	434	0.105 8019	9.896 0049	165	40	
	30	9.790 2298	269	9.894 2415	433	0.105 7585	9.895 9884	165	30	
	40	9.790 2567	269	9.894 2848	434	0.105 7152	9.895 9719	165	20	
	50	9.790 2836	268	9.894 3282	433	0.105 6718	9.895 9554	165	10	
6	0	9.790 3104	269	9.894 3715	434	0.105 6285	9.895 9389	165	0	54
	10	9.790 3373	268	9.894 4149	434	0.105 5851	9.895 9224	165	50	
	20	9.790 3641	269	9.894 4583	433	0.105 5417	9.895 9059	166	40	
	30	9.790 3910	268	9.894 5016	434	0.105 4984	9.895 8893	165	30	
	40	9.790 4178	268	9.894 5450	433	0.105 4550	9.895 8728	165	20	
	50	9.790 4446	269	9.894 5883	434	0.105 4117	9.895 8563	165	10	
7	0	9.790 4715	268	9.894 6317	434	0.105 3683	9.895 8398	165	0	53
	10	9.790 4983	269	9.894 6751	433	0.105 3249	9.895 8233	166	50	
	20	9.790 5252	268	9.894 7184	434	0.105 2816	9.895 8067	165	40	
	30	9.790 5520	268	9.894 7618	433	0.105 2382	9.895 7902	165	30	
	40	9.790 5788	268	9.894 8051	434	0.105 1949	9.895 7737	165	20	
	50	9.790 6056	269	9.894 8485	433	0.105 1515	9.895 7572	166	10	
8	0	9.790 6325	268	9.894 8918	434	0.105 1082	9.895 7406	165	0	52
	10	9.790 6593	268	9.894 9352	433	0.105 0648	9.895 7241	165	50	
	20	9.790 6861	268	9.894 9785	434	0.105 0215	9.895 7076	166	40	
	30	9.790 7129	268	9.895 0219	433	0.104 9781	9.895 6910	165	30	
	40	9.790 7397	268	9.895 0652	433	0.104 9348	9.895 6745	165	20	
	50	9.790 7665	268	9.895 1085	434	0.104 8915	9.895 6580	166	10	
9	0	9.790 7933	268	9.895 1519	433	0.104 8481	9.895 6414	165	0	51
	10	9.790 8201	268	9.895 1952	434	0.104 8048	9.895 6249	165	50	
	20	9.790 8469	268	9.895 2386	433	0.104 7614	9.895 6084	166	40	
	30	9.790 8737	268	9.895 2819	434	0.104 7181	9.895 5918	165	30	
	40	9.790 9005	268	9.895 3253	433	0.104 6747	9.895 5753	166	20	
	50	9.790 9273	268	9.895 3686	433	0.104 6314	9.895 5587	165	10	
10	0	9.790 9541		9.895 4119		0.104 5881	9.895 5422		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

51°

38°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.790 9541	268	9.895 4119	434	0.104 5881	9.895 5422	166	0	50
	10	9.790 9809	268	9.895 4553	433	0.104 5447	9.895 5256	165	50	
	20	9.791 0077	268	9.895 4986	433	0.104 5014	9.895 5091	166	40	
	30	9.791 0345	267	9.895 5419	434	0.104 4581	9.895 4925	165	30	
	40	9.791 0612	268	9.895 5853	433	0.104 4147	9.895 4760	166	20	
	50	9.791 0880	268	9.895 6286	433	0.104 3714	9.895 4594	165	10	
11	0	9.791 1148	268	9.895 6719	434	0.104 3281	9.895 4429	166	0	49
	10	9.791 1416	267	9.895 7153	433	0.104 2847	9.895 4263	166	50	
	20	9.791 1683	268	9.895 7586	433	0.104 2414	9.895 4097	165	40	
	30	9.791 1951	268	9.895 8019	434	0.104 1981	9.895 3932	166	30	
	40	9.791 2219	267	9.895 8453	433	0.104 1547	9.895 3766	166	20	
	50	9.791 2486	268	9.895 8886	433	0.104 1114	9.895 3600	165	10	
12	0	9.791 2754	267	9.895 9319	433	0.104 0681	9.895 3435	166	0	48
	10	9.791 3021	268	9.895 9752	434	0.104 0248	9.895 3269	166	50	
	20	9.791 3289	267	9.896 0186	433	0.103 9814	9.895 3103	165	40	
	30	9.791 3556	268	9.896 0619	433	0.103 9381	9.895 2938	166	30	
	40	9.791 3824	267	9.896 1052	433	0.103 8948	9.895 2772	166	20	
	50	9.791 4091	268	9.896 1485	433	0.103 8515	9.895 2606	166	10	
13	0	9.791 4359	267	9.896 1918	434	0.103 8082	9.895 2440	166	0	47
	10	9.791 4626	267	9.896 2352	433	0.103 7648	9.895 2274	165	50	
	20	9.791 4893	268	9.896 2785	433	0.103 7215	9.895 2109	166	40	
	30	9.791 5161	267	9.896 3218	433	0.103 6782	9.895 1943	166	30	
	40	9.791 5428	267	9.896 3651	433	0.103 6349	9.895 1777	166	20	
	50	9.791 5695	268	9.896 4084	433	0.103 5916	9.895 1611	166	10	
14	0	9.791 5963	267	9.896 4517	434	0.103 5483	9.895 1445	166	0	46
	10	9.791 6230	267	9.896 4951	433	0.103 5049	9.895 1279	166	50	
	20	9.791 6497	267	9.896 5384	433	0.103 4616	9.895 1113	166	40	
	30	9.791 6764	267	9.896 5817	433	0.103 4183	9.895 0947	165	30	
	40	9.791 7031	267	9.896 6250	433	0.103 3750	9.895 0782	166	20	
	50	9.791 7298	268	9.896 6683	433	0.103 3317	9.895 0616	166	10	
15	0	9.791 7566	267	9.896 7116	433	0.103 2884	9.895 0450	166	0	45
	10	9.791 7833	267	9.896 7549	433	0.103 2451	9.895 0284	166	50	
	20	9.791 8100	267	9.896 7982	433	0.103 2018	9.895 0118	166	40	
	30	9.791 8367	267	9.896 8415	433	0.103 1585	9.894 9952	166	30	
	40	9.791 8634	267	9.896 8848	433	0.103 1152	9.894 9786	167	20	
	50	9.791 8901	267	9.896 9281	433	0.103 0719	9.894 9619	166	10	
16	0	9.791 9168	267	9.896 9714	433	0.103 0286	9.894 9453	166	0	44
	10	9.791 9435	266	9.897 0147	433	0.102 9853	9.894 9287	166	50	
	20	9.791 9701	267	9.897 0580	433	0.102 9420	9.894 9121	166	40	
	30	9.791 9968	267	9.897 1013	433	0.102 8987	9.894 8955	166	30	
	40	9.792 0235	267	9.897 1446	433	0.102 8554	9.894 8789	166	20	
	50	9.792 0502	267	9.897 1879	433	0.102 8121	9.894 8623	166	10	
17	0	9.792 0769	266	9.897 2312	433	0.102 7688	9.894 8457	167	0	43
	10	9.792 1035	267	9.897 2745	433	0.102 7255	9.894 8290	166	50	
	20	9.792 1302	267	9.897 3178	433	0.102 6822	9.894 8124	166	40	
	30	9.792 1569	267	9.897 3611	433	0.102 6389	9.894 7958	166	30	
	40	9.792 1836	266	9.897 4044	433	0.102 5956	9.894 7792	167	20	
	50	9.792 2102	267	9.897 4477	433	0.102 5523	9.894 7625	166	10	
18	0	9.792 2369	266	9.897 4910	432	0.102 5090	9.894 7459	166	0	42
	10	9.792 2635	267	9.897 5342	433	0.102 4658	9.894 7293	166	50	
	20	9.792 2902	266	9.897 5775	433	0.102 4225	9.894 7127	167	40	
	30	9.792 3168	267	9.897 6208	433	0.102 3792	9.894 6960	166	30	
	40	9.792 3435	266	9.897 6641	433	0.102 3359	9.894 6794	166	20	
	50	9.792 3701	267	9.897 7074	433	0.102 2926	9.894 6628	167	10	
19	0	9.792 3968	266	9.897 7507	433	0.102 2493	9.894 6461	166	0	41
	10	9.792 4234	267	9.897 7940	432	0.102 2060	9.894 6295	167	50	
	20	9.792 4501	266	9.897 8372	433	0.102 1628	9.894 6128	166	40	
	30	9.792 4767	267	9.897 8805	433	0.102 1195	9.894 5962	166	30	
	40	9.792 5034	266	9.897 9238	433	0.102 0762	9.894 5796	167	20	
	50	9.792 5300	266	9.897 9671	433	0.102 0329	9.894 5629	166	10	
20	0	9.792 5566		9.898 0104		0.101 9896	9.894 5463		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

51°

	433
1	43.3
2	86.6
3	129.9
4	173.2
5	216.5
6	259.8
7	303.1
8	346.4
9	389.7

	432
1	43.2
2	86.4
3	129.6
4	172.8
5	216.0
6	259.2
7	302.4
8	345.6
9	388.8

	267
1	26.7
2	53.4
3	80.1
4	106.8
5	133.5
6	160.2
7	186.9
8	213.6
9	240.3

	266
1	26.6
2	53.2
3	79.8
4	106.4
5	133.0
6	159.6
7	186.2
8	212.8
9	239.4

	166
1	16.6
2	33.2
3	49.8
4	66.4
5	83.0
6	99.6
7	116.2
8	132.8
9	149.4

	167
1	16.7
2	33.4
3	50.1
4	66.8
5	83.5
6	100.2
7	116.9
8	133.6
9	150.3

38°

	433
1	43.3
2	86.6
3	129.9
4	173.2
5	216.5
6	259.8
7	303.1
8	346.4
9	389.7

	267
1	26.7
2	53.4
3	80.1
4	106.8
5	133.5
6	160.2
7	186.9
8	213.6
7	240.3

	266
1	26.6
2	53.2
3	79.8
4	106.4
5	133.0
6	159.6
7	186.2
8	212.8
9	239.4

	265
1	26.5
2	53.0
3	79.5
4	106.0
5	132.5
6	159.0
7	185.5
8	212.0
9	238.5

	166
1	16.6
2	33.2
3	49.8
4	66.4
5	83.0
6	99.6
7	116.2
8	132.8
9	149.4

	167
1	16.7
2	33.4
3	50.1
4	66.8
5	83.5
6	100.2
7	116.9
8	133.6
9	150.3

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
20	0	9.792 5566	266	9.898 0104	432	0.101 9896	9.894 5463	167	0	40
	10	9.792 5832	267	9.898 0536	433	0.101 9464	9.894 5296	166	50	
	20	9.792 6099	266	9.898 0969	433	0.101 9031	9.894 5130	167	40	
	30	9.792 6365	266	9.898 1402	433	0.101 8598	9.894 4963	166	30	
	40	9.792 6631	266	9.898 1835	432	0.101 8165	9.894 4797	167	20	
	50	9.792 6897	266	9.898 2267	433	0.101 7733	9.894 4630	167	10	
21	0	9.792 7163	266	9.898 2700	433	0.101 7300	9.894 4463	166	0	39
	10	9.792 7429	267	9.898 3133	432	0.101 6867	9.894 4297	167	50	
	20	9.792 7696	266	9.898 3565	433	0.101 6435	9.894 4130	166	40	
	30	9.792 7962	266	9.898 3998	433	0.101 6002	9.894 3964	167	30	
	40	9.792 8228	266	9.898 4431	432	0.101 5569	9.894 3797	167	20	
	50	9.792 8494	266	9.898 4863	433	0.101 5137	9.894 3630	166	10	
22	0	9.792 8760	266	9.898 5296	433	0.101 4704	9.894 3464	167	0	38
	10	9.792 9026	266	9.898 5729	432	0.101 4271	9.894 3297	167	50	
	20	9.792 9292	265	9.898 6161	433	0.101 3839	9.894 3130	167	40	
	30	9.792 9557	266	9.898 6594	433	0.101 3406	9.894 2963	166	30	
	40	9.792 9823	266	9.898 7027	432	0.101 2973	9.894 2797	167	20	
	50	9.793 0089	266	9.898 7459	433	0.101 2541	9.894 2630	167	10	
23	0	9.793 0355	266	9.898 7892	432	0.101 2108	9.894 2463	167	0	37
	10	9.793 0621	266	9.898 8324	433	0.101 1676	9.894 2296	166	50	
	20	9.793 0887	265	9.898 8757	433	0.101 1243	9.894 2130	167	40	
	30	9.793 1152	266	9.898 9190	432	0 101 0810	9.894 1963	167	30	
	40	9.793 1418	266	9.898 9622	433	0.101 0378	9.894 1796	167	20	
	50	9.793 1684	265	9.899 0055	432	0.100 9945	9.894 1629	167	10	
24	0	9.793 1949	266	9.899 0487	433	0.100 9513	9.894 1462	167	0	36
	10	9.793 2215	266	9.899 0920	432	0.100 9080	9.894 1295	167	50	
	20	9.793 2481	265	9.899 1352	433	0.100 8648	9.894 1128	167	40	
	30	9.793 2746	266	9.899 1785	432	0.100 8215	9.894 0961	166	30	
	40	9.793 3012	265	9.899 2217	433	0.100 7783	9.894 0795	167	20	
	50	9.793 3277	266	9.899 2650	432	0.100 7350	9.894 0628	167	10	
25	0	9.793 3543	265	9.899 3082	433	0.100 6918	9.894 0461	167	0	35
	10	9.793 3808	266	9.899 3515	432	0.100 6485	9.894 0294	167	50	
	20	9.793 4074	265	9.899 3947	433	0.100 6053	9.894 0127	167	40	
	30	9.793 4339	266	9.899 4380	432	0.100 5620	9.893 9960	167	30	
	40	9.793 4605	265	9.899 4812	432	0.100 5188	9.893 9793	167	20	
	50	9.793 4870	265	9.899 5244	433	0.100 4756	9.893 9626	168	10	
26	0	9.793 5135	266	9.899 5677	432	0.100 4323	9.893 9458	167	0	34
	10	9.793 5401	265	9.899 6109	433	0.100 3891	9.893 9291	167	50	
	20	9.793 5666	265	9.899 6542	432	0.100 3458	9.893 9124	167	40	
	30	9.793 5931	265	9.899 6974	432	0.100 3026	9.893 8957	167	30	
	40	9.793 6196	266	9.899 7406	433	0.100 2594	9.893 8790	167	20	
	50	9.793 6462	265	9.899 7839	432	0.100 2161	9.893 8623	167	10	
27	0	9.793 6727	265	9.899 8271	432	0.100 1729	9.893 8456	168	0	33
	10	9.793 6992	265	9.899 8703	433	0.100 1297	9.893 8288	167	50	
	20	9.793 7257	265	9.899 9136	432	0.100 0864	9.893 8121	167	40	
	30	9.793 7522	265	9.899 9568	432	0.100 0432	9.893 7954	167	30	
	40	9.793 7787	265	9.900 0000	433	0.100 0000	9.893 7787	167	20	
	50	9.793 8052	265	9.900 0433	432	0.099 9567	9.893 7620	168	10	
28	0	9.793 8317	265	9.900 0865	432	0.099 9135	9.893 7452	167	0	32
	10	9.793 8582	265	9.900 1297	433	0.099 8703	9.893 7285	167	50	
	20	9.793 8847	265	9.900 1730	432	0.099 8270	9.893 7118	168	40	
	30	9.793 9112	265	9.900 2162	432	0.099 7838	9.893 6950	167	30	
	40	9.793 9377	265	9.900 2594	432	0.099 7406	9.893 6783	167	20	
	50	9.793 9642	265	9.900 3026	433	0.099 6974	9.893 6616	168	10	
29	0	9.793 9907	265	9.900 3459	432	0.099 6541	9.893 6448	167	0	31
	10	9.794 0172	265	9.900 3891	432	0.099 6109	9.893 6281	168	50	
	20	9.794 0437	264	9.900 4323	432	0.099 5677	9.893 6113	167	40	
	30	9.794 0701	265	9.900 4755	433	0.099 5245	9.893 5946	167	30	
	40	9.794 0966	265	9.900 5188	432	0.099 4812	9.893 5779	168	20	
	50	9.794 1231	265	9.900 5620	432	0.099 4380	9.893 5611	167	10	
30	0	9.794 1496		9.900 6052		0.099 3948	9.893 5444		0	30
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

51°

38°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.794 1496	264	9.900 6052	432	0.099 3948	9.893 5444	168	0	30
	10	9.794 1760	265	9.900 6484	432	0.099 3516	9.893 5276	167	50	
	20	9.794 2025	265	9.900 6916	432	0.099 3084	9.893 5109	168	40	
	30	9.794 2290	264	9.900 7348	433	0.099 2652	9.893 4941	167	30	
	40	9.794 2554	265	9.900 7781	432	0.099 2219	9.893 4774	168	20	
	50	9.794 2819	264	9.900 8213	432	0.099 1787	9.893 4606	167	10	
31	0	9.794 3083	265	9.900 8645	432	0.099 1355	9.893 4439	168	0	29
	10	9.794 3348	264	9.900 9077	432	0.099 0923	9.893 4271	168	50	
	20	9.794 3612	265	9.900 9509	432	0.099 0491	9.893 4103	167	40	
	30	9.794 3877	264	9.900 9941	432	0.099 0059	9.893 3936	168	30	
	40	9.794 4141	265	9.901 0373	432	0.098 9627	9.893 3768	168	20	
	50	9.794 4406	264	9.901 0805	432	0.098 9195	9.893 3600	167	10	
32	0	9.794 4670	265	9.901 1237	433	0.098 8763	9.893 3433	168	0	28
	10	9.794 4935	264	9.901 1670	432	0.098 8330	9.893 3265	168	50	
	20	9.794 5199	264	9.901 2102	432	0.098 7898	9.893 3097	167	40	
	30	9.794 5463	265	9.901 2534	432	0.098 7466	9.893 2930	168	30	
	40	9.794 5728	264	9.901 2966	432	0.098 7034	9.893 2762	168	20	
	50	9.794 5992	264	9.901 3398	432	0.098 6602	9.893 2594	168	10	
33	0	9.794 6256	264	9.901 3830	432	0.098 6170	9.893 2426	167	0	27
	10	9.794 6520	264	9.901 4262	432	0.098 5738	9.893 2259	168	50	
	20	9.794 6784	265	9.901 4694	432	0.098 5306	9.893 2091	168	40	
	30	9.794 7049	264	9.901 5126	432	0.098 4874	9.893 1923	168	30	
	40	9.794 7313	264	9.901 5558	432	0.098 4442	9.893 1755	168	20	
	50	9.794 7577	264	9.901 5990	432	0.098 4010	9.893 1587	168	10	
34	0	9.794 7841	264	9.901 6422	431	0.098 3578	9.893 1419	168	0	26
	10	9.794 8105	264	9.901 6853	432	0.098 3147	9.893 1251	167	50	
	20	9.794 8369	264	9.901 7285	432	0.098 2715	9.893 1084	168	40	
	30	9.794 8633	264	9.901 7717	432	0.098 2283	9.893 0916	168	30	
	40	9.794 8897	264	9.901 8149	432	0.098 1851	9.893 0748	168	20	
	50	9.794 9161	264	9.901 8581	432	0.098 1419	9.893 0580	168	10	
35	0	9.794 9425	264	9.901 9013	432	0.098 0987	9.893 0412	168	0	25
	10	9.794 9689	264	9.901 9445	432	0.098 0555	9.893 0244	168	50	
	20	9.794 9953	263	9.901 9877	432	0.098 0123	9.893 0076	168	40	
	30	9.795 0216	264	9.902 0309	432	0.097 9691	9.892 9908	168	30	
	40	9.795 0480	264	9.902 0741	431	0.097 9259	9.892 9740	168	20	
	50	9.795 0744	264	9.902 1172	432	0.097 8828	9.892 9572	168	10	
36	0	9.795 1008	264	9.902 1604	432	0.097 8396	9.892 9404	168	0	24
	10	9.795 1272	263	9.902 2036	432	0.097 7964	9.892 9236	169	50	
	20	9.795 1535	264	9.902 2468	432	0.097 7532	9.892 9067	168	40	
	30	9.795 1799	264	9.902 2900	432	0.097 7100	9.892 8899	168	30	
	40	9.795 2063	263	9.902 3332	431	0.097 6668	9.892 8731	168	20	
	50	9.795 2326	264	9.902 3763	432	0.097 6237	9.892 8563	168	10	
37	0	9.795 2590	263	9.902 4195	432	0.097 5805	9.892 8395	168	0	23
	10	9.795 2853	264	9.902 4627	432	0.097 5373	9.892 8227	169	50	
	20	9.795 3117	264	9.902 5059	431	0.097 4941	9.892 8058	168	40	
	30	9.795 3381	263	9.902 5490	432	0.097 4510	9.892 7890	168	30	
	40	9.795 3644	264	9.902 5922	432	0.097 4078	9.892 7722	168	20	
	50	9.795 3908	263	9.902 6354	432	0.097 3646	9.892 7554	169	10	
38	0	9.795 4171	263	9.902 6786	431	0.097 3214	9.892 7385	168	0	22
	10	9.795 4434	264	9.902 7217	432	0.097 2783	9.892 7217	168	50	
	20	9.795 4698	263	9.902 7649	432	0.097 2351	9.892 7049	169	40	
	30	9.795 4961	264	9.902 8081	431	0.097 1919	9.892 6880	168	30	
	40	9.795 5225	263	9.902 8512	432	0.097 1488	9.892 6712	168	20	
	50	9.795 5488	263	9.902 8944	432	0.097 1056	9.892 6544	169	10	
39	0	9.795 5751	263	9.902 9376	431	0.097 0624	9.892 6375	168	0	21
	10	9.795 6014	264	9.902 9807	432	0.097 0193	9.892 6207	168	50	
	20	9.795 6278	263	9.903 0239	432	0.096 9761	9.892 6039	169	40	
	30	9.795 6541	263	9.903 0671	431	0.096 9329	9.892 5870	168	30	
	40	9.795 6804	263	9.903 1102	432	0.096 8898	9.892 5702	169	20	
	50	9.795 7067	263	9.903 1534	432	0.096 8466	9.892 5533	168	10	
40	0	9.795 7330		9.903 1966		0.096 8034	9.892 5365		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

51°

	432
1	43.2
2	86.4
3	129.6
4	172.8
5	216.0
6	259.2
7	302.4
8	345.6
9	388.8

	431
1	43.1
2	86.2
3	129.3
4	172.4
5	215.5
6	258.6
7	301.7
8	344.8
9	387.9

	264
1	26.4
2	52.8
3	79.2
4	105.6
5	132.0
6	158.4
7	184.8
8	211.2
9	237.6

	263
1	26.3
2	52.6
3	78.9
4	105.2
5	131.5
6	157.8
7	184.1
8	210.4
9	236.7

	168
1	16.8
2	33.6
3	50.4
4	67.2
5	84.0
6	100.8
7	117.6
8	134.4
9	151.2

	169
1	16.9
2	33.8
3	50.7
4	67.6
5	84.5
6	101.4
7	118.3
8	135.2
9	152.1

38°

432	
1	43.2
2	86.4
3	129.6
4	172.8
5	216.0
6	259.2
7	302.4
8	345.6
9	388.8

264	
1	26.4
2	52.8
3	79.2
4	105.6
5	132.0
6	158.4
7	184.8
8	211.2
9	237.6

263	
1	26.3
2	52.6
3	78.9
4	105.2
5	131.5
6	157.8
7	184.1
8	210.4
9	236.7

262	
1	26.2
2	52.4
3	78.6
4	104.8
5	131.0
6	157.2
7	183.4
8	209.6
9	235.8

168	
1	16.8
2	33.6
3	50.4
4	67.2
5	84.0
6	100.8
7	117.6
8	134.4
9	151.2

169	
1	16.9
2	33.8
3	50.7
4	67.6
5	84.5
6	101.4
7	118.3
8	135.2
9	152.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.795 7330	263	9.903 1966	431	0.096 8034	9.892 5365	169	0	20
	10	9.795 7593	264	9.903 2397	432	0.096 7603	9.892 5196	168	50	
	20	9.795 7857	263	9.903 2829	431	0.096 7171	9.892 5028	169	40	
	30	9.795 8120	263	9.903 3260	432	0.096 6740	9.892 4859	168	30	
	40	9.795 8383	263	9.903 3692	431	0.096 6308	9.892 4691	169	20	
	50	9.795 8646	263	9.903 4123	432	0.096 5877	9.892 4522	168	10	
41	0	9.795 8909	263	9.903 4555	432	0.096 5445	9.892 4354	169	0	19
	10	9.795 9172	263	9.903 4987	431	0.096 5013	9.892 4185	169	50	
	20	9.795 9435	262	9.903 5418	432	0.096 4582	9.892 4016	168	40	
	30	9.795 9697	263	9.903 5850	431	0.096 4150	9.892 3848	169	30	
	40	9.795 9960	263	9.903 6281	432	0.096 3719	9.892 3679	169	20	
	50	9.796 0223	263	9.903 6713	431	0.096 3287	9.892 3510	168	10	
42	0	9.796 0486	263	9.903 7144	432	0.096 2856	9.892 3342	169	0	18
	10	9.796 0749	263	9.903 7576	431	0.096 2424	9.892 3173	169	50	
	20	9.796 1012	262	9.903 8007	432	0.096 1993	9.892 3004	168	40	
	30	9.796 1274	263	9.903 8439	431	0.096 1561	9.892 2836	169	30	
	40	9.796 1537	263	9.903 8870	432	0.096 1130	9.892 2667	169	20	
	50	9.796 1800	262	9.903 9302	431	0.096 0698	9.892 2498	169	10	
43	0	9.796 2062	263	9.903 9733	431	0.096 0267	9.892 2329	168	0	17
	10	9.796 2325	263	9.904 0164	432	0.095 9836	9.892 2161	169	50	
	20	9.796 2588	262	9.904 0596	431	0.095 9404	9.892 1992	169	40	
	30	9.796 2850	263	9.904 1027	432	0.095 8973	9.892 1823	169	30	
	40	9.796 3113	262	9.904 1459	431	0.095 8541	9.892 1654	169	20	
	50	9.796 3375	263	9.904 1890	431	0.095 8110	9.892 1485	169	10	
44	0	9.796 3638	262	9.904 2321	432	0.095 7679	9.892 1316	168	0	16
	10	9.796 3900	263	9.904 2753	431	0.095 7247	9.892 1148	169	50	
	20	9.796 4163	262	9.904 3184	432	0.095 6816	9.892 0979	169	40	
	30	9.796 4425	263	9.904 3616	431	0.095 6384	9.892 0810	169	30	
	40	9.796 4688	262	9.904 4047	431	0.095 5953	9.892 0641	169	20	
	50	9.796 4950	262	9.904 4478	432	0.095 5522	9.892 0472	169	10	
45	0	9.796 5212	263	9.904 4910	431	0.095 5090	9.892 0303	169	0	15
	10	9.796 5475	262	9.904 5341	431	0.095 4659	9.892 0134	169	50	
	20	9.796 5737	262	9.904 5772	432	0.095 4228	9.891 9965	169	40	
	30	9.796 5999	263	9.904 6204	431	0.095 3796	9.891 9796	169	30	
	40	9.796 6262	262	9.904 6635	431	0.095 3365	9.891 9627	169	20	
	50	9.796 6524	262	9.904 7066	431	0.095 2934	9.891 9458	169	10	
46	0	9.796 6786	262	9.904 7497	432	0.095 2503	9.891 9289	170	0	14
	10	9.796 7048	262	9.904 7929	431	0.095 2071	9.891 9119	169	50	
	20	9.796 7310	262	9.904 8360	431	0.095 1640	9.891 8950	169	40	
	30	9.796 7572	262	9.904 8791	431	0.095 1209	9.891 8781	169	30	
	40	9.796 7834	263	9.904 9222	432	0.095 0778	9.891 8612	169	20	
	50	9.796 8097	262	9.904 9654	431	0.095 0346	9.891 8443	169	10	
47	0	9.796 8359	262	9.905 0085	431	0.094 9915	9.891 8274	169	0	13
	10	9.796 8621	262	9.905 0516	431	0.094 9484	9.891 8105	170	50	
	20	9.796 8883	262	9.905 0947	431	0.094 9053	9.891 7935	169	40	
	30	9.796 9145	262	9.905 1378	432	0.094 8622	9.891 7766	169	30	
	40	9.796 9407	261	9.905 1810	431	0.094 8190	9.891 7597	169	20	
	50	9.796 9668	262	9.905 2241	431	0.094 7759	9.891 7428	170	10	
48	0	9.796 9930	262	9.905 2672	431	0.094 7328	9.891 7258	169	0	12
	10	9.797 0192	262	9.905 3103	431	0.094 6897	9.891 7089	169	50	
	20	9.797 0454	262	9.905 3534	431	0.094 6466	9.891 6920	170	40	
	30	9.797 0716	262	9.905 3965	432	0.094 6035	9.891 6750	169	30	
	40	9.797 0978	261	9.905 4397	431	0.094 5603	9.891 6581	169	20	
	50	9.797 1239	262	9.905 4828	431	0.094 5172	9.891 6412	170	10	
49	0	9.797 1501	262	9.905 5259	431	0.094 4741	9.891 6242	169	0	11
	10	9.797 1763	261	9.905 5690	431	0.094 4310	9.891 6073	170	50	
	20	9.797 2024	262	9.905 6121	431	0.094 3879	9.891 5903	169	40	
	30	9.797 2286	262	9.905 6552	431	0.094 3448	9.891 5734	169	30	
	40	9.797 2548	261	9.905 6983	431	0.094 3017	9.891 5565	170	20	
	50	9.797 2809	262	9.905 7414	431	0.094 2586	9.891 5395	169	10	
50	0	9.797 3071		9.905 7845		0.094 2155	9.891 5226		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

51°

38°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.797 3071	261	9.905 7845	431	0.094 2155	9.891 5226	170	0	10
	10	9.797 3332	262	9.905 8276	431	0.094 1724	9.891 5056	169	50	
	20	9.797 3594	262	9.905 8707	431	0.094 1293	9.891 4887	170	40	
	30	9.797 3856	261	9.905 9138	431	0.094 0862	9.891 4717	169	30	
	40	9.797 4117	261	9.905 9569	431	0.094 0431	9.891 4548	170	20	
	50	9.797 4378	262	9.906 0000	431	0.094 0000	9.891 4378	170	10	
51	0	9.797 4640	261	9.906 0431	431	0.093 9569	9.891 4208	169	0	9
	10	9.797 4901	262	9.906 0862	431	0.093 9138	9.891 4039	170	50	
	20	9.797 5163	261	9.906 1293	431	0.093 8707	9.891 3869	169	40	
	30	9.797 5424	261	9.906 1724	431	0.093 8276	9.891 3700	170	30	
	40	9.797 5685	262	9.906 2155	431	0.093 7845	9.891 3530	170	20	
	50	9.797 5947	261	9.906 2586	431	0.093 7414	9.891 3360	169	10	
52	0	9.797 6208	261	9.906 3017	431	0.093 6983	9.891 3191	170	0	8
	10	9.797 6469	261	9.906 3448	431	0.093 6552	9.891 3021	170	50	
	20	9.797 6730	261	9.906 3879	431	0.093 6121	9.891 2851	170	40	
	30	9.797 6991	262	9.906 4310	431	0.093 5690	9.891 2681	169	30	
	40	9.797 7253	261	9.906 4741	431	0.093 5259	9.891 2512	170	20	
	50	9.797 7514	261	9.906 5172	431	0.093 4828	9.891 2342	170	10	
53	0	9.797 7775	261	9.906 5603	431	0.093 4397	9.891 2172	170	0	7
	10	9.797 8036	261	9.906 6034	430	0.093 3966	9.891 2002	169	50	
	20	9.797 8297	261	9.906 6464	431	0.093 3536	9.891 1833	170	40	
	30	9.797 8558	261	9.906 6895	431	0.093 3105	9.891 1663	170	30	
	40	9.797 8819	261	9.906 7326	431	0.093 2674	9.891 1493	170	20	
	50	9.797 9080	261	9.906 7757	431	0.093 2243	9.891 1323	170	10	
54	0	9.797 9341	261	9.906 8188	431	0.093 1812	9.891 1153	170	0	6
	10	9.797 9602	261	9.906 8619	431	0.093 1381	9.891 0983	170	50	
	20	9.797 9863	261	9.906 9050	430	0.093 0950	9.891 0813	170	40	
	30	9.798 0124	261	9.906 9480	431	0.093 0520	9.891 0643	170	30	
	40	9.798 0385	260	9.906 9911	431	0.093 0089	9.891 0473	170	20	
	50	9.798 0645	261	9.907 0342	431	0.092 9658	9.891 0303	170	10	
55	0	9.798 0906	261	9.907 0773	431	0.092 9227	9.891 0133	170	0	5
	10	9.798 1167	261	9.907 1204	430	0.092 8796	9.890 9963	170	50	
	20	9.798 1428	260	9.907 1634	431	0.092 8366	9.890 9793	170	40	
	30	9.798 1688	261	9.907 2065	431	0.092 7935	9.890 9623	170	30	
	40	9.798 1949	261	9.907 2496	431	0.092 7504	9.890 9453	170	20	
	50	9.798 2210	260	9.907 2927	430	0.092 7073	9.890 9283	170	10	
56	0	9.798 2470	261	9.907 3357	431	0.092 6643	9.890 9113	170	0	4
	10	9.798 2731	261	9.907 3788	431	0.092 6212	9.890 8943	170	50	
	20	9.798 2992	260	9.907 4219	430	0.092 5781	9.890 8773	170	40	
	30	9.798 3252	261	9.907 4649	431	0.092 5351	9.890 8603	170	30	
	40	9.798 3513	260	9.907 5080	431	0.092 4920	9.890 8433	171	20	
	50	9.798 3773	261	9.907 5511	430	0.092 4489	9.890 8262	170	10	
57	0	9.798 4034	260	9.907 5941	431	0.092 4059	9.890 8092	170	0	3
	10	9.798 4294	261	9.907 6372	431	0.092 3628	9.890 7922	170	50	
	20	9.798 4555	260	9.907 6803	430	0.092 3197	9.890 7752	170	40	
	30	9.798 4815	260	9.907 7233	431	0.092 2767	9.890 7582	171	30	
	40	9.798 5075	261	9.907 7664	431	0.092 2336	9.890 7411	170	20	
	50	9.798 5336	260	9.907 8095	430	0.092 1905	9.890 7241	170	10	
58	0	9.798 5596	260	9.907 8525	431	0.092 1475	9.890 7071	171	0	2
	10	9.798 5856	261	9.907 8956	431	0.092 1044	9.890 6900	170	50	
	20	9.798 6117	260	9.907 9387	430	0.092 0613	9.890 6730	170	40	
	30	9.798 6377	260	9.907 9817	431	0.092 0183	9.890 6560	171	30	
	40	9.798 6637	260	9.908 0248	430	0.091 9752	9.890 6389	170	20	
	50	9.798 6897	261	9.908 0678	431	0.091 9322	9.890 6219	170	10	
59	0	9.798 7158	260	9.908 1109	430	0.091 8891	9.890 6049	171	0	1
	10	9.798 7418	260	9.908 1539	431	0.091 8461	9.890 5878	170	50	
	20	9.798 7678	260	9.908 1970	431	0.091 8030	9.890 5708	171	40	
	30	9.798 7938	260	9.908 2401	430	0.091 7599	9.890 5537	170	30	
	40	9.798 8198	260	9.908 2831	431	0.091 7169	9.890 5367	171	20	
	50	9.798 8458	260	9.908 3262	430	0.091 6738	9.890 5196	170	10	
60	0	9.798 8718		9.908 3692		0.091 6308	9.890 5026		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

51°

431	
1	43.1
2	86.2
3	129.3
4	172.4
5	215.5
6	258.6
7	301.7
8	344.8
9	387.9

430	
1	43.0
2	86.0
3	129.0
4	172.0
5	215.0
6	258.0
7	301.0
8	344.0
9	387.0

261	
1	26.1
2	52.2
3	78.3
4	104.4
5	130.5
6	156.6
7	182.7
8	208.8
9	234.9

260	
1	26.0
2	52.0
3	78.0
4	104.0
5	130.0
6	156.0
7	182.0
8	208.0
9	234.0

170	
1	17.0
2	34.0
3	51.0
4	68.0
5	85.0
6	102.0
7	119.0
8	136.0
9	153.0

171	
1	17.1
2	34.2
3	51.3
4	68.4
5	85.5
6	102.6
7	119.7
8	136.8
9	153.9

39°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.798 8718	260	9.908 3692	431	0.091 6308	9.890 5026	171	0	60
	10	9.798 8978	260	9.908 4123	430	0.091 5877	9.890 4855	170	50	
	20	9.798 9238	260	9.908 4553	431	0.091 5447	9.890 4685	171	40	
	30	9.798 9498	260	9.908 4984	430	0.091 5016	9.890 4514	170	30	
	40	9.798 9758	260	9.908 5414	431	0.091 4586	9.890 4344	171	20	
	50	9.799 0018	260	9.908 5845	430	0.091 4155	9.890 4173	170	10	
1	0	9.799 0278	259	9.908 6275	430	0.091 3725	9.890 4003	171	0	59
	10	9.799 0537	260	9.908 6705	431	0.091 3295	9.890 3832	171	50	
	20	9.799 0797	260	9.908 7136	430	0.091 2864	9.890 3661	170	40	
	30	9.799 1057	260	9.908 7566	431	0.091 2434	9.890 3491	171	30	
	40	9.799 1317	260	9.908 7997	430	0.091 2003	9.890 3320	171	20	
	50	9.799 1577	259	9.908 8427	431	0.091 1573	9.890 3149	170	10	
2	0	9.799 1836	260	9.908 8858	430	0.091 1142	9.890 2979	171	0	58
	10	9.799 2096	260	9.908 9288	430	0.091 0712	9.890 2808	171	50	
	20	9.799 2356	259	9.908 9718	431	0.091 0282	9.890 2637	170	40	
	30	9.799 2615	260	9.909 0149	430	0.090 9851	9.890 2467	171	30	
	40	9.799 2875	259	9.909 0579	431	0.090 9421	9.890 2296	171	20	
	50	9.799 3134	260	9.909 1010	430	0.090 8990	9.890 2125	171	10	
3	0	9.799 3394	260	9.909 1440	430	0.090 8560	9.890 1954	171	0	57
	10	9.799 3654	259	9.909 1870	431	0.090 8130	9.890 1783	170	50	
	20	9.799 3913	260	9.909 2301	430	0.090 7699	9.890 1613	171	40	
	30	9.799 4173	259	9.909 2731	430	0.090 7269	9.890 1442	171	30	
	40	9.799 4432	259	9.909 3161	431	0.090 6839	9.890 1271	171	20	
	50	9.799 4691	260	9.909 3592	430	0.090 6408	9.890 1100	171	10	
4	0	9.799 4951	259	9.909 4022	430	0.090 5978	9.890 0929	171	0	56
	10	9.799 5210	260	9.909 4452	430	0.090 5548	9.890 0758	171	50	
	20	9.799 5470	259	9.909 4882	431	0.090 5118	9.890 0587	171	40	
	30	9.799 5729	259	9.909 5313	430	0.090 4627	9.890 0416	171	30	
	40	9.799 5988	260	9.909 5743	430	0.090 4257	9.890 0245	171	20	
	50	9.799 6248	259	9.909 6173	430	0.090 3827	9.890 0074	171	10	
5	0	9.799 6507	259	9.909 6603	431	0.090 3397	9.889 9903	171	0	55
	10	9.799 6766	259	9.909 7034	430	0.090 2966	9.889 9732	171	50	
	20	9.799 7025	259	9.909 7464	430	0.090 2536	9.889 9561	171	40	
	30	9.799 7284	259	9.909 7894	430	0.090 2106	9.889 9390	171	30	
	40	9.799 7543	260	9.909 8324	431	0.090 1676	9.889 9219	171	20	
	50	9.799 7803	259	9.909 8755	430	0.090 1245	9.889 9048	171	10	
6	0	9.799 8062	259	9.909 9185	430	0.090 0815	9.889 8877	171	0	54
	10	9.799 8321	259	9.909 9615	430	0.090 0385	9.889 8706	171	50	
	20	9.799 8580	259	9.910 0045	430	0.089 9955	9.889 8535	171	40	
	30	9.799 8839	259	9.910 0475	431	0.089 9525	9.889 8364	172	30	
	40	9.799 9098	259	9.910 0906	430	0.089 9094	9.889 8192	171	20	
	50	9.799 9357	259	9.910 1336	430	0.089 8664	9.889 8021	171	10	
7	0	9.799 9616	259	9.910 1766	430	0.089 8234	9.889 7850	171	0	53
	10	9.799 9875	259	9.910 2196	430	0.089 7804	9.889 7679	172	50	
	20	9.800 0134	258	9.910 2626	430	0.089 7374	9.889 7507	171	40	
	30	9.800 0392	259	9.910 3056	430	0.089 6944	9.889 7336	171	30	
	40	9.800 0651	259	9.910 3486	430	0.089 6514	9.889 7165	171	20	
	50	9.800 0910	259	9.910 3916	431	0.089 6084	9.889 6994	172	10	
8	0	9.800 1169	259	9.910 4347	430	0.089 5653	9.889 6822	171	0	52
	10	9.800 1428	258	9.910 4777	430	0.089 5223	9.889 6651	171	50	
	20	9.800 1686	259	9.910 5207	430	0.089 4793	9.889 6480	172	40	
	30	9.800 1945	259	9.910 5637	430	0.089 4363	9.889 6308	171	30	
	40	9.800 2204	258	9.910 6067	430	0.089 3933	9.889 6137	171	20	
	50	9.800 2462	259	9.910 6497	430	0.089 3503	9.889 5966	172	10	
9	0	9.800 2721	259	9.910 6927	430	0.089 3073	9.889 5794	171	0	51
	10	9.800 2980	258	9.910 7357	430	0.089 2643	9.889 5623	172	50	
	20	9.800 3238	259	9.910 7787	430	0.089 2213	9.889 5451	171	40	
	30	9.800 3497	258	9.910 8217	430	0.089 1783	9.889 5280	172	30	
	40	9.800 3755	259	9.910 8647	430	0.089 1353	9.889 5108	171	20	
	50	9.800 4014	258	9.910 9077	430	0.089 0923	9.889 4937	172	10	
10	0	9.800 4272		9.910 9507		0.089 0493	9.889 4765		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

50°

	431
1	43.1
2	86.2
3	129.3
4	172.4
5	215.5
6	258.6
7	301.7
8	344.8
9	387.9

	430
1	43.0
2	86.0
3	129.0
4	172.0
5	215.0
6	258.0
7	301.0
8	344.0
9	387.0

	260
1	26.0
2	52.0
3	78.0
4	104.0
5	130.0
6	156.0
7	182.0
8	208.0
9	234.0

	259
1	25.9
2	51.8
3	77.7
4	103.6
5	129.5
6	155.4
7	181.3
8	207.2
9	233.1

	170
1	17.0
2	34.0
3	51.0
4	68.0
5	85.0
6	102.0
7	119.0
8	136.0
9	153.0

	171
1	17.1
2	34.2
3	51.3
4	68.4
5	85.5
6	102.6
7	119.7
8	136.8
9	153.9

39°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.800 4272	259	9.910 9507	430	0.089 0493	9.889 4765	171	0	50
	10	9.800 4531	258	9.910 9937	430	0.089 0063	9.889 4594	172	50	
	20	9.800 4789	259	9.911 0367	430	0.088 9633	9.889 4422	171	40	
	30	9.800 5048	258	9.911 0797	430	0.088 9203	9.889 4251	172	30	
	40	9.800 5306	258	9.911 1227	430	0.088 8773	9.889 4079	171	20	
	50	9.800 5564	259	9.911 1657	430	0.088 8343	9.889 3908	172	10	
11	0	9.800 5823	258	9.911 2087	430	0.088 7913	9.889 3736	172	0	49
	10	9.800 6081	258	9.911 2517	430	0.088 7483	9.889 3564	171	50	
	20	9.800 6339	259	9.911 2947	430	0.088 7053	9.889 3393	172	40	
	30	9.800 6598	258	9.911 3377	429	0.088 6623	9.889 3221	172	30	
	40	9.800 6856	258	9.911 3806	430	0.088 6194	9.889 3049	171	20	
	50	9.800 7114	258	9.911 4236	430	0.088 5764	9.889 2878	172	10	
12	0	9.800 7372	258	9.911 4666	430	0.088 5334	9.889 2706	172	0	48
	10	9.800 7630	258	9.911 5096	430	0.088 4904	9.889 2534	172	50	
	20	9.800 7888	259	9.911 5526	430	0.088 4474	9.889 2362	171	40	
	30	9.800 8147	258	9.911 5956	430	0.088 4044	9.889 2191	172	30	
	40	9.800 8405	258	9.911 6386	430	0.088 3614	9.889 2019	172	20	
	50	9.800 8663	258	9.911 6816	429	0.088 3184	9.889 1847	172	10	
13	0	9.800 8921	258	9.911 7245	430	0.088 2755	9.889 1675	172	0	47
	10	9.800 9179	258	9.911 7675	430	0.088 2325	9.889 1503	171	50	
	20	9.800 9437	258	9.911 8105	430	0.088 1895	9.889 1332	172	40	
	30	9.800 9695	257	9.911 8535	430	0.088 1465	9.889 1160	172	30	
	40	9.800 9952	258	9.911 8965	429	0.088 1035	9.889 0988	172	20	
	50	9.801 0210	258	9.911 9394	430	0.088 0606	9.889 0816	172	10	
14	0	9.801 0468	258	9.911 9824	430	0.088 0176	9.889 0644	172	0	46
	10	9.801 0726	258	9.912 0254	430	0.087 9746	9.889 0472	172	50	
	20	9.801 0984	258	9.912 0684	430	0.087 9316	9.889 0300	172	40	
	30	9.801 1242	257	9.912 1114	429	0.087 8886	9.889 0128	172	30	
	40	9.801 1499	258	9.912 1543	430	0.087 8457	9.888 9956	172	20	
	50	9.801 1757	258	9.912 1973	430	0.087 8027	9.888 9784	172	10	
15	0	9.801 2015	258	9.912 2403	429	0.087 7597	9.888 9612	172	0	45
	10	9.801 2273	257	9.912 2832	430	0.087 7168	9.888 9440	172	50	
	20	9.801 2530	258	9.912 3262	430	0.087 6738	9.888 9268	172	40	
	30	9.801 2788	258	9.912 3692	430	0.087 6308	9.888 9096	172	30	
	40	9.801 3046	257	9.912 4122	429	0.087 5878	9.888 8924	172	20	
	50	9.801 3303	258	9.912 4551	430	0.087 5449	9.888 8752	172	10	
16	0	9.801 3561	257	9.912 4981	430	0.087 5019	9.888 8580	172	0	44
	10	9.801 3818	258	9.912 5411	429	0.087 4589	9.888 8408	173	50	
	20	9.801 4076	257	9.912 5840	430	0.087 4160	9.888 8235	172	40	
	30	9.801 4333	258	9.912 6270	430	0.087 3730	9.888 8063	172	30	
	40	9.801 4591	257	9.912 6700	429	0.087 3300	9.888 7891	172	20	
	50	9.801 4848	258	9.912 7129	430	0.087 2871	9.888 7719	172	10	
17	0	9.801 5106	257	9.912 7559	430	0.087 2441	9.888 7547	173	0	43
	10	9.801 5363	257	9.912 7989	429	0.087 2011	9.888 7374	172	50	
	20	9.801 5620	258	9.912 8418	430	0.087 1582	9.888 7202	172	40	
	30	9.801 5878	257	9.912 8848	429	0.087 1152	9.888 7030	172	30	
	40	9.801 6135	257	9.912 9277	430	0.087 0723	9.888 6858	173	20	
	50	9.801 6392	257	9.912 9707	430	0.087 0293	9.888 6685	372	10	
18	0	9.801 6649	258	9.913 0137	429	0.086 9863	9.888 6513	172	0	42
	10	9.801 6907	257	9.913 0566	430	0.086 9434	9.888 6341	173	50	
	20	9.801 7164	257	9.913 0996	429	0.086 9004	9.888 6168	172	40	
	30	9.801 7421	257	9.913 1425	430	0.086 8575	9.888 5996	173	30	
	40	9.801 7678	257	9.913 1855	429	0.086 8145	9.888 5823	172	20	
	50	9.801 7935	257	9.913 2284	430	0.086 7716	9.888 5651	172	10	
19	0	9.801 8192	258	9.913 2714	429	0.086 7286	9.888 5479	173	0	41
	10	9.801 8450	257	9.913 3143	430	0.086 6857	9.888 5306	172	50	
	20	9.801 8707	257	9.913 3573	429	0.086 6427	9.888 5134	173	40	
	30	9.801 8964	257	9.913 4002	430	0.086 5998	9.888 4961	172	30	
	40	9.801 9221	257	9.913 4432	429	0.086 5568	9.888 4789	173	20	
	50	9.801 9478	257	9.913 4861	430	0.086 5139	9.888 4616	172	10	
20	0	9.801 9735		9.913 5291		0.086 4709	9.888 4444		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

50°

	430
1	43.0
2	86.0
3	129.0
4	172.0
5	215.0
6	258.0
7	301.0
8	344.0
9	387.0

	429
1	42.9
2	85.8
3	128.7
4	171.6
5	214.5
6	257.4
7	300.3
8	343.2
9	386.1

	258
1	25.8
2	51.6
3	77.4
4	103.2
5	129.0
6	154.8
7	180.6
8	206.4
9	232.2

	257
1	25.7
2	51.4
3	77.1
4	102.8
5	128.5
6	154.2
7	179.9
8	205.6
9	231.3

	172
1	17.2
2	34.4
3	51.6
4	68.8
5	86.0
6	103.2
7	120.4
8	137.6
9	154.8

	173
1	17.3
2	34.6
3	51.9
4	69.2
5	86.5
6	103.8
7	121.1
8	138.4
9	155.7

39°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.801 9735	256	9.913 5291	429	0.086 4709	9.888 4444	173	0	40
	10	9.801 9991	257	9.913 5720	430	0.086 4280	9.888 4271	172	50	
	20	9.802 0248	257	9.913 6150	429	0.086 3850	9.888 4099	173	40	
	30	9.802 0505	257	9.913 6579	430	0.086 3421	9.888 3926	173	30	
	40	9.802 0762	257	9.913 7009	429	0.086 2991	9.888 3753	172	20	
	50	9.802 1019	257	9.913 7438	430	0.086 2562	9.888 3581	173	10	
21	0	9.802 1276	256	9.913 7868	429	0.086 2132	9.888 3408	173	0	39
	10	9.802 1532	257	9.913 8297	429	0.086 1703	9.888 3235	172	50	
	20	9.802 1789	257	9.913 8726	430	0.086 1274	9.888 3063	173	40	
	30	9.802 2046	257	9.913 9156	429	0.086 0844	9.888 2890	173	30	
	40	9.802 2303	256	9.913 9585	430	0.086 0415	9.888 2717	172	20	
	50	9.802 2559	257	9.914 0015	429	0.085 9985	9.888 2545	173	10	
22	0	9.802 2816	257	9.914 0444	429	0.085 9556	9.888 2372	173	0	38
	10	9.802 3073	256	9.914 0873	430	0.085 9127	9.888 2199	173	50	
	20	9.802 3329	257	9.914 1303	429	0.085 8697	9.888 2026	172	40	
	30	9.802 3586	256	9.914 1732	429	0.085 8268	9.888 1854	173	30	
	40	9.802 3842	257	9.914 2161	430	0.085 7839	9.888 1681	173	20	
	50	9.802 4099	256	9.914 2591	429	0.085 7409	9.888 1508	173	10	
23	0	9.802 4355	257	9.914 3020	429	0.085 6980	9.888 1335	173	0	37
	10	9.802 4612	256	9.914 3449	430	0.085 6551	9.888 1162	173	50	
	20	9.802 4868	257	9.914 3879	429	0.085 6121	9.888 0989	172	40	
	30	9.802 5125	256	9.914 4308	429	0.085 5692	9.888 0817	173	30	
	40	9.802 5381	256	9.914 4737	430	0.085 5263	9.888 0644	173	20	
	50	9.802 5637	257	9.914 5167	429	0.085 4833	9.888 0471	173	10	
24	0	9.802 5894	256	9.914 5596	429	0.085 4404	9.888 0298	173	0	36
	10	9.802 6150	256	9.914 6025	429	0.085 3975	9.888 0125	173	50	
	20	9.802 6406	257	9.914 6454	430	0.085 3546	9.887 9952	173	40	
	30	9.802 6663	256	9.914 6884	429	0.085 3116	9.887 9779	173	30	
	40	9.802 6919	256	9.914 7313	429	0.085 2687	9.887 9606	173	20	
	50	9.802 7175	256	9.914 7742	429	0.085 2258	9.887 9433	173	10	
25	0	9.802 7431	256	9.914 8171	430	0.085 1829	9.887 9260	173	0	35
	10	9.802 7687	257	9.914 8601	429	0.085 1399	9.887 9087	173	50	
	20	9.802 7944	256	9.914 9030	429	0.085 0970	9.887 8914	173	40	
	30	9.802 8200	256	9.914 9459	429	0.085 0541	9.887 8741	174	30	
	40	9.802 8456	256	9.914 9888	430	0.085 0112	9.887 8567	173	20	
	50	9.802 8712	256	9.915 0318	429	0.084 9682	9.887 8394	173	10	
26	0	9.802 8968	256	9.915 0747	429	0.084 9253	9.887 8221	173	0	34
	10	9.802 9224	256	9.915 1176	429	0.084 8824	9.887 8048	173	50	
	20	9.802 9480	256	9.915 1605	429	0.084 8395	9.887 7875	173	40	
	30	9.802 9736	256	9.915 2034	429	0.084 7966	9.887 7702	174	30	
	40	9.802 9992	256	9.915 2463	430	0.084 7537	9.887 7528	173	20	
	50	9.803 0248	256	9.915 2893	429	0.084 7107	9.887 7355	173	10	
27	0	9.803 0504	255	9.915 3322	429	0.084 6678	9.887 7182	173	0	33
	10	9.803 0759	256	9.915 3751	429	0.084 6249	9.887 7009	174	50	
	20	9.803 1015	256	9.915 4180	429	0.084 5820	9.887 6835	173	40	
	30	9.803 1271	256	9.915 4609	429	0.084 5391	9.887 6662	173	30	
	40	9.803 1527	256	9.915 5038	429	0.084 4962	9.887 6489	174	20	
	50	9.803 1783	255	9.915 5467	429	0.084 4533	9.887 6315	173	10	
28	0	9.803 2038	256	9.915 5896	429	0.084 4104	9.887 6142	173	0	32
	10	9.803 2294	256	9.915 6325	429	0.084 3675	9.887 5969	174	50	
	20	9.803 2550	255	9.915 6754	430	0.084 3246	9.887 5795	173	40	
	30	9.803 2805	256	9.915 7184	429	0.084 2816	9.887 5622	173	30	
	40	9.803 3061	256	9.915 7613	429	0.084 2387	9.887 5449	174	20	
	50	9.803 3317	255	9.915 8042	429	0.084 1958	9.887 5275	173	10	
29	0	9.803 3572	256	9.915 8471	429	0.084 1529	9.887 5102	174	0	31
	10	9.803 3828	255	9.915 8900	429	0.084 1100	9.887 4928	173	50	
	20	9.803 4083	256	9.915 9329	429	0.084 0671	9.887 4755	174	40	
	30	9.803 4339	255	9.915 9758	429	0.084 0242	9.887 4581	173	30	
	40	9.803 4594	256	9.916 0187	429	0.083 9813	9.887 4408	174	20	
	50	9.803 4850	255	9.916 0616	429	0.083 9384	9.887 4234	173	10	
30	0	9.803 5105		9.916 1045		0.083 8955	9.887 4061		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	430
1	43.0
2	86.0
3	129.0
4	172.0
5	215.0
6	258.0
7	301.0
8	344.0
9	387.0

	429
1	42.9
2	85.8
3	128.7
4	171.6
5	214.5
6	257.4
7	300.3
8	343.2
9	386.1

	257
1	25.7
2	51.4
3	77.1
4	102.8
5	128.5
6	154.2
7	179.9
8	205.6
9	231.3

	256
1	25.6
2	51.2
3	76.8
4	102.4
5	128.0
6	153.6
7	179.2
8	204.8
9	230.4

	172
1	17.2
2	34.4
3	51.6
4	68.8
5	86.0
6	103.2
7	120.4
8	137.6
9	154.8

	173
1	17.3
2	34.6
3	51.9
4	69.2
5	86.5
6	103.8
7	121.1
8	138.4
9	155.7

50°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.803 5105	256	9.916 1045	429	0.083 8955	9.887 4061	174	0	30
	10	9.803 5361	255	9.916 1474	429	0.083 8526	9.887 3887	174	50	
	20	9.803 5616	255	9.916 1903	429	0.083 8097	9.887 3713	173	40	
	30	9.803 5871	256	9.916 2332	429	0.083 7668	9.887 3540	174	30	
	40	9.803 6127	255	9.916 2761	429	0.083 7239	9.887 3366	173	20	
	50	9.803 6382	255	9.916 3190	428	0.083 6810	9.887 3193	174	10	
31	0	9.803 6637	256	9.916 3618	429	0.083 6382	9.887 3019	174	0	29
	10	9.803 6893	255	9.916 4047	429	0.083 5953	9.887 2845	174	50	
	20	9.803 7148	255	9.916 4476	429	0.083 5524	9.887 2671	173	40	
	30	9.803 7403	255	9.916 4905	429	0.083 5095	9.887 2498	174	30	
	40	9.803 7658	255	9.916 5334	429	0.083 4666	9.887 2324	174	20	
	50	9.803 7913	255	9.916 5763	429	0.083 4237	9.887 2150	173	10	
32	0	9.803 8168	256	9.916 6192	429	0.083 3808	9.887 1977	174	0	28
	10	9.803 8424	255	9.916 6621	429	0.083 3379	9.887 1803	174	50	
	20	9.803 8679	255	9.916 7050	429	0.083 2950	9.887 1629	174	40	
	30	9.803 8934	255	9.916 7479	428	0.083 2521	9.887 1455	174	30	
	40	9.803 9189	255	9.916 7907	429	0.083 2093	9.887 1281	174	20	
	50	9.803 9444	255	9.916 8336	429	0.083 1664	9.887 1107	173	10	
33	0	9.803 9699	255	9.916 8765	429	0.083 1235	9.887 0934	174	0	27
	10	9.803 9954	255	9.916 9194	429	0.083 0806	9.887 0760	174	50	
	20	9.804 0209	255	9.916 9623	429	0.083 0377	9.887 0586	174	40	
	30	9.804 0464	254	9.917 0052	428	0.082 9948	9.887 0412	174	30	
	40	9.804 0718	255	9.917 0480	429	0.082 9520	9.887 0238	174	20	
	50	9.804 0973	255	9.917 0909	429	0.082 9091	9.887 0064	174	10	
34	0	9.804 1228	255	9.917 1338	429	0.082 8662	9.886 9890	174	0	26
	10	9.804 1483	255	9.917 1767	429	0.082 8233	9.886 9716	174	50	
	20	9.804 1738	254	9.917 2196	428	0.082 7804	9.886 9542	174	40	
	30	9.804 1992	255	9.917 2624	429	0.082 7376	9.886 9368	174	30	
	40	9.804 2247	255	9.917 3053	429	0.082 6947	9.886 9194	174	20	
	50	9.804 2502	255	9.917 3482	429	0.082 6518	9.886 9020	174	10	
35	0	9.804 2757	254	9.917 3911	428	0.082 6089	9.886 8846	174	0	25
	10	9.804 3011	255	9.917 4339	429	0.082 5661	9.886 8672	174	50	
	20	9.804 3266	254	9.917 4768	429	0.082 5232	9.886 8498	174	40	
	30	9.804 3520	255	9.917 5197	429	0.082 4803	9.886 8324	175	30	
	40	9.804 3775	255	9.917 5626	428	0.082 4374	9.886 8149	174	20	
	50	9.804 4030	254	9.917 6054	429	0.082 3946	9.886 7975	174	10	
36	0	9.804 4284	255	9.917 6483	429	0.082 3517	9.886 7801	174	0	24
	10	9.804 4539	254	9.917 6912	428	0.082 3088	9.886 7627	174	50	
	20	9.804 4793	254	9.917 7340	429	0.082 2660	9.886 7453	175	40	
	30	9.804 5047	255	9.917 7769	429	0.082 2231	9.886 7278	174	30	
	40	9.804 5302	254	9.917 8198	428	0.082 1802	9.886 7104	174	20	
	50	9.804 5556	255	9.917 8626	429	0.082 1374	9.886 6930	174	10	
37	0	9.804 5811	254	9.917 9055	429	0.082 0945	9.886 6756	175	0	23
	10	9.804 6065	254	9.917 9484	428	0.082 0516	9.886 6581	174	50	
	20	9.804 6319	255	9.917 9912	429	0.082 0088	9.886 6407	174	40	
	30	9.804 6574	254	9.918 0341	429	0.081 9659	9.886 6233	175	30	
	40	9.804 6828	254	9.918 0770	428	0.081 9230	9.886 6058	174	20	
	50	9.804 7082	254	9.918 1198	429	0.081 8802	9.886 5884	174	10	
38	0	9.804 7336	255	9.918 1627	428	0.081 8373	9.886 5710	175	0	22
	10	9.804 7591	254	9.918 2055	429	0.081 7945	9.886 5535	174	50	
	20	9.804 7845	254	9.918 2484	429	0.081 7516	9.886 5361	175	40	
	30	9.804 8099	254	9.918 2913	428	0.081 7087	9.886 5186	174	30	
	40	9.804 8353	254	9.918 3341	429	0.081 6659	9.886 5012	175	20	
	50	9.804 8607	254	9.918 3770	428	0.081 6230	9.886 4837	174	10	
39	0	9.804 8861	254	9.918 4198	429	0.081 5802	9.886 4663	175	0	21
	10	9.804 9115	254	9.918 4627	428	0.081 5373	9.886 4488	174	50	
	20	9.804 9369	254	9.918 5055	429	0.081 4945	9.886 4314	175	40	
	30	9.804 9623	254	9.918 5484	428	0.081 4516	9.886 4139	174	30	
	40	9.804 9877	254	9.918 5912	429	0.081 4088	9.886 3965	175	20	
	50	9.805 0131	254	9.918 6341	428	0.081 3659	9.886 3790	174	10	
40	0	9.805 0385		9.918 6769		0.081 3231	9.886 3616		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

50°

	429
1	42.9
2	85.8
3	128.7
4	171.6
5	214.5
6	257.4
7	300.3
8	343.2
9	386.1

	428
1	42.8
2	85.6
3	128.4
4	171.2
5	214.0
6	256.8
7	299.6
8	342.4
9	385.2

	255
1	25.5
2	51.0
3	76.5
4	102.0
5	127.5
6	153.0
7	178.5
8	204.0
9	229.5

	254
1	25.4
2	50.8
3	76.2
4	101.6
5	127.0
6	152.4
7	177.8
8	203.2
9	228.6

	174
1	17.4
2	34.8
3	52.2
4	69.6
5	87.0
6	104.4
7	121.8
8	139.2
9	156.6

	175
1	17.5
2	35.0
3	52.5
4	70.0
5	87.5
6	105.0
7	122.5
8	140.0
9	157.5

39°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.805 0385	254	9.918 6769	429	0.081 3231	9.886 3616	175	0	20
	10	9.805 0639	254	9.918 7198	428	0.081 2802	9.886 3441	175	50	
	20	9.805 0893	254	9.918 7626	429	0.081 2374	9.886 3266	174	40	
	30	9.805 1147	254	9.918 8055	428	0.081 1945	9.886 3092	175	30	
	40	9.805 1401	253	9.918 8483	429	0.081 1517	9.886 2917	174	20	
	50	9.805 1654	254	9.918 8912	428	0.081 1088	9.886 2743	175	10	
41	0	9.805 1908	254	9.918 9340	429	0.081 0660	9.886 2568	175	0	19
	10	9.805 2162	254	9.918 9769	428	0.081 0231	9.886 2393	175	50	
	20	9.805 2416	253	9.919 0197	429	0.080 9803	9.886 2218	174	40	
	30	9.805 2669	254	9.919 0626	428	0.080 9374	9.886 2044	175	30	
	40	9.805 2923	254	9.919 1054	429	0.080 8946	9.886 1869	175	20	
	50	9.805 3177	253	9.919 1483	428	0.080 8517	9.886 1694	175	10	
42	0	9.805 3430	254	9.919 1911	428	0.080 8089	9.886 1519	175	0	18
	10	9.805 3684	253	9.919 2339	429	0.080 7661	9.886 1344	174	50	
	20	9.805 3937	254	9.919 2768	428	0.080 7232	9.886 1170	175	40	
	30	9.805 4191	254	9.919 3196	429	0.080 6804	9.886 0995	175	30	
	40	9.805 4445	253	9.919 3625	428	0.080 6375	9.886 0820	175	20	
	50	9.805 4698	253	9.919 4053	428	0.080 5947	9.886 0645	175	10	
43	0	9.805 4951	254	9.919 4481	429	0.080 5519	9.886 0470	175	0	17
	10	9.805 5205	253	9.919 4910	428	0.080 5090	9.886 0295	175	50	
	20	9.805 5458	254	9.919 5338	428	0.080 4662	9.886 0120	175	40	
	30	9.805 5712	253	9.919 5766	429	0.080 4234	9.885 9945	175	30	
	40	9.805 5965	253	9.919 6195	428	0.080 3805	9.885 9770	175	20	
	50	9.805 6218	254	9.919 6623	428	0.080 3377	9.885 9595	175	10	
44	0	9.805 6472	253	9.919 7051	429	0.080 2949	9.885 9420	175	0	16
	10	9.805 6725	253	9.919 7480	428	0.080 2520	9.885 9245	175	50	
	20	9.805 6978	254	9.919 7908	428	0.080 2092	9.885 9070	175	40	
	30	9.805 7232	253	9.919 8336	429	0.080 1664	9.885 8895	175	30	
	40	9.805 7485	253	9.919 8765	428	0.080 1235	9.885 8720	175	20	
	50	9.805 7738	253	9.919 9193	428	0.080 0807	9.885 8545	175	10	
45	0	9.805 7991	253	9.919 9621	428	0.080 0379	9.885 8370	175	0	15
	10	9.805 8244	253	9.920 0049	429	0.079 9951	9.885 8195	175	50	
	20	9.805 8497	254	9.920 0478	428	0.079 9522	9.885 8020	175	40	
	30	9.805 8751	253	9.920 0906	428	0.079 9094	9.885 7845	176	30	
	40	9.805 9004	253	9.920 1334	428	0.079 8666	9.885 7669	175	20	
	50	9.805 9257	253	9.920 1762	429	0.079 8238	9.885 7494	175	10	
46	0	9.805 9510	253	9.920 2191	428	0.079 7809	9.885 7319	175	0	14
	10	9.805 9763	253	9.920 2619	428	0.079 7381	9.885 7144	175	50	
	20	9.806 0016	253	9.920 3047	428	0.079 6953	9.885 6969	176	40	
	30	9.806 0269	253	9.920 3475	429	0.079 6525	9.885 6793	175	30	
	40	9.806 0522	252	9.920 3904	428	0.079 6096	9.885 6618	175	20	
	50	9.806 0774	253	9.920 4332	428	0.079 5668	9.885 6443	176	10	
47	0	9.806 1027	253	9.920 4760	428	0.079 5240	9.885 6267	175	0	13
	10	9.806 1280	253	9.920 5188	428	0.079 4812	9.885 6092	175	50	
	20	9.806 1533	253	9.920 5616	428	0.079 4384	9.885 5917	176	40	
	30	9.806 1786	253	9.920 6044	429	0.079 3956	9.885 5741	175	30	
	40	9.806 2039	252	9.920 6473	428	0.079 3527	9.885 5566	175	20	
	50	9.806 2291	253	9.920 6901	428	0.079 3099	9.885 5391	176	10	
48	0	9.806 2544	253	9.920 7329	428	0.079 2671	9.885 5215	175	0	12
	10	9.806 2797	252	9.920 7757	428	0.079 2243	9.885 5040	176	50	
	20	9.806 3049	253	9.920 8185	428	0.079 1815	9.885 4864	175	40	
	30	9.806 3302	253	9.920 8613	428	0.079 1387	9.885 4689	176	30	
	40	9.806 3555	252	9.920 9041	428	0.079 0959	9.885 4513	175	20	
	50	9.806 3807	253	9.920 9469	429	0.079 0531	9.885 4338	176	10	
49	0	9.806 4060	252	9.920 9898	428	0.079 0102	9.885 4162	175	0	11
	10	9.806 4312	253	9.921 0326	428	0.078 9674	9.885 3987	176	50	
	20	9.806 4565	252	9.921 0754	428	0.078 9246	9.885 3811	175	40	
	30	9.806 4817	253	9.921 1182	428	0.078 8818	9.885 3636	176	30	
	40	9.806 5070	252	9.921 1610	428	0.078 8390	9.885 3460	176	20	
	50	9.806 5322	253	9.921 2038	428	0.078 7962	9.885 3284	175	10	
50	0	9.806 5575		9.921 2466		0.078 7534	9.885 3109		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

50°

	429
1	42.9
2	85.8
3	128.7
4	171.6
5	214.5
6	257.4
7	300.3
8	343.2
9	386.1

	428
1	42.8
2	85.6
3	128.4
4	171.2
5	214.0
6	256.8
7	299.6
8	342.4
9	385.2

	254
1	25.4
2	50.8
3	76.2
4	101.6
5	127.0
6	152.4
7	177.8
8	203.2
9	228.6

	253
1	25.3
2	50.6
3	75.9
4	101.2
5	126.5
6	151.8
7	177.1
8	202.4
9	227.7

	174
1	17.4
2	34.8
3	52.2
4	69.6
5	87.0
6	104.4
7	121.8
8	139.2
9	156.6

	175
1	17.5
2	35.0
3	52.5
4	70.0
5	87.5
6	105.0
7	122.5
8	140.0
9	157.5

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.806 5575	252	9.921 2466	428	0.078 7534	9.885 3109	176	0	10
	10	9.806 5827	253	9.921 2894	428	0.078 7106	9.885 2933	175	50	
	20	9.806 6080	252	9.921 3322	428	0.078 6678	9.885 2758	176	40	
	30	9.806 6332	252	9.921 3750	428	0.078 6250	9.885 2582	176	30	
	40	9.806 6584	253	9.921 4178	428	0.078 5822	9.885 2406	176	20	
	50	9.806 6837	252	9.921 4606	428	0.078 5394	9.885 2230	175	10	
51	0	9.806 7089	252	9.921 5034	428	0.078 4966	9.885 2055	176	0	9
	10	9.806 7341	252	9.921 5462	428	0.078 4538	9.885 1879	176	50	
	20	9.806 7593	253	9.921 5890	428	0.078 4110	9.885 1703	176	40	
	30	9.806 7846	252	9.921 6318	428	0.078 3682	9.885 1527	175	30	
	40	9.806 8098	252	9.921 6746	428	0.078 3254	9.885 1352	176	20	
	50	9.806 8350	252	9.921 7174	428	0.078 2826	9.885 1176	176	10	
52	0	9.806 8602	252	9.921 7602	428	0.078 2398	9.885 1000	176	0	8
	10	9.806 8854	252	9.921 8030	428	0.078 1970	9.885 0824	176	50	
	20	9.806 9106	252	9.921 8458	428	0.078 1542	9.885 0648	176	40	
	30	9.806 9358	252	9.921 8886	428	0.078 1114	9.885 0472	175	30	
	40	9.806 9610	252	9.921 9314	428	0.078 0686	9.885 0297	176	20	
	50	9.806 9862	252	9.921 9742	428	0.078 0258	9.885 0121	176	10	
53	0	9.807 0114	252	9.922 0170	428	0.077 9830	9.884 9945	176	0	7
	10	9.807 0366	252	9.922 0598	427	0.077 9402	9.884 9769	176	50	
	20	9.807 0618	252	9.922 1025	428	0.077 8975	9.884 9593	176	40	
	30	9.807 0870	252	9.922 1453	428	0.077 8547	9.884 9417	176	30	
	40	9.807 1122	252	9.922 1881	428	0.077 8119	9.884 9241	176	20	
	50	9.807 1374	252	9.922 2309	428	0.077 7691	9.884 9065	176	10	
54	0	9.807 1626	251	9.922 2737	428	0.077 7263	9.884 8889	176	0	6
	10	9.807 1877	252	9.922 3165	428	0.077 6835	9.884 8713	176	50	
	20	9.807 2129	252	9.922 3593	427	0.077 6407	9.884 8537	177	40	
	30	9.807 2381	252	9.922 4020	428	0.077 5980	9.884 8360	176	30	
	40	9.807 2633	251	9.922 4448	428	0.077 5552	9.884 8184	176	20	
	50	9.807 2884	252	9.922 4876	428	0.077 5124	9.884 8008	176	10	
55	0	9.807 3136	252	9.922 5304	428	0.077 4696	9.884 7832	176	0	5
	10	9.807 3388	251	9.922 5732	428	0.077 4268	9.884 7656	176	50	
	20	9.807 3639	252	9.922 6160	427	0.077 3840	9.884 7480	176	40	
	30	9.807 3891	252	9.922 6587	428	0.077 3413	9.884 7304	177	30	
	40	9.807 4143	251	9.922 7015	428	0.077 2985	9.884 7127	176	20	
	50	9.807 4394	252	9.922 7443	428	0.077 2557	9.884 6951	176	10	
56	0	9.807 4646	251	9.922 7871	428	0.077 2129	9.884 6775	176	0	4
	10	9.807 4897	252	9.922 8299	427	0.077 1701	9.884 6599	177	50	
	20	9.807 5149	251	9.922 8726	428	0.077 1274	9.884 6422	176	40	
	30	9.807 5400	252	9.922 9154	428	0.077 0846	9.884 6246	176	30	
	40	9.807 5652	251	9.922 9582	428	0.077 0418	9.884 6070	177	20	
	50	9.807 5903	251	9.923 0010	427	0.076 9990	9.884 5893	176	10	
57	0	9.807 6154	252	9.923 0437	428	0.076 9563	9.884 5717	176	0	3
	10	9.807 6406	251	9.923 0865	428	0.076 9135	9.884 5541	177	50	
	20	9.807 6657	251	9.923 1293	427	0.076 8707	9.884 5364	176	40	
	30	9.807 6908	252	9.923 1720	428	0.076 8280	9.884 5188	177	30	
	40	9.807 7160	251	9.923 2148	428	0.076 7852	9.884 5011	176	20	
	50	9.807 7411	251	9.923 2576	428	0.076 7424	9.884 4835	176	10	
58	0	9.807 7662	251	9.923 3004	427	0.076 6996	9.884 4659	177	0	2
	10	9.807 7913	251	9.923 3431	428	0.076 6569	9.884 4482	176	50	
	20	9.807 8164	252	9.923 3859	428	0.076 6141	9.884 4306	177	40	
	30	9.807 8416	251	9.923 4287	427	0.076 5713	9.884 4129	176	30	
	40	9.807 8667	251	9.923 4714	428	0.076 5286	9.884 3953	177	20	
	50	9.807 8918	251	9.923 5142	428	0.076 4858	9.884 3776	177	10	
59	0	9.807 9169	251	9.923 5570	427	0.076 4430	9.884 3599	176	0	1
	10	9.807 9420	251	9.923 5997	428	0.076 4003	9.884 3423	177	50	
	20	9.807 9671	251	9.923 6425	427	0.076 3575	9.884 3246	176	40	
	30	9.807 9922	251	9.923 6852	428	0.076 3148	9.884 3070	177	30	
	40	9.808 0173	251	9.923 7280	428	0.076 2720	9.884 2893	177	20	
	50	9.808 0424	251	9.923 7708	427	0.076 2292	9.884 2716	176	10	
60	0	9.808 0675		9.923 8135		0.076 1865	9.884 2540		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

50°

	428
1	42.8
2	85.6
3	128.4
4	171.2
5	214.0
6	256.8
7	299.6
8	342.4
9	385.2

	427
1	42.7
2	85.4
3	128.1
4	170.8
5	213.5
6	256.2
7	298.9
8	341.6
9	384.3

	252
1	25.2
2	50.4
3	75.6
4	100.8
5	126.0
6	151.2
7	176.4
8	201.6
9	226.8

	251
1	25.1
2	50.2
3	75.3
4	100.4
5	125.5
6	150.6
7	175.7
8	200.8
9	225.9

	176
1	17.6
2	35.2
3	52.8
4	70.4
5	88.0
6	105.6
7	123.2
8	140.8
9	158.4

	177
1	17.7
2	35.4
3	53.1
4	70.8
5	88.5
6	106.2
7	123.9
8	141.6
9	159.3

40°

428	
1	42.8
2	85.6
3	128.4
4	171.2
5	214.0
6	256.8
7	299.6
8	342.4
9	385.2

427	
1	42.7
2	85.4
3	128.1
4	170.8
5	213.5
6	256.2
7	298.9
8	341.6
9	384.3

251	
1	25.1
2	50.2
3	75.3
4	100.4
5	125.5
6	150.6
7	175.7
8	200.8
9	225.9

250	
1	25.0
2	50.0
3	75.0
4	100.0
5	125.0
6	150.0
7	175.0
8	200.0
9	225.0

176	
1	17.6
2	35.2
3	52.8
4	70.4
5	88.0
6	105.6
7	123.2
8	140.8
9	158.4

177	
1	17.7
2	35.4
3	53.1
4	70.8
5	88.5
6	106.2
7	123.9
8	141.6
9	159.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.808 0675	251	9.923 8135	428	0.076 1865	9.884 2540	177	0	60
	10	9.808 0926	251	9.923 8563	427	0.076 1437	9.884 2363	177	50	
	20	9.808 1177	251	9.923 8990	428	0.076 1010	9.884 2186	176	40	
	30	9.808 1428	250	9.923 9418	428	0.076 0582	9.884 2010	177	30	
	40	9.808 1678	251	9.923 9846	427	0.076 0154	9.884 1833	177	20	
	50	9.808 1929	251	9.924 0273	428	0.075 9727	9.884 1656	177	10	
1	0	9.808 2180	251	9.924 0701	427	0.075 9299	9.884 1479	176	0	59
	10	9.808 2431	251	9.924 1128	428	0.075 8872	9.884 1303	177	50	
	20	9.808 2682	250	9.924 1556	427	0.075 8444	9.884 1126	177	40	
	30	9.808 2932	251	9.924 1983	428	0.075 8017	9.884 0949	177	30	
	40	9.808 3183	251	9.924 2411	427	0.075 7589	9.884 0772	177	20	
	50	9.808 3434	250	9.924 2838	428	0.075 7162	9.884 0595	177	10	
2	0	9.808 3684	251	9.924 3266	427	0.075 6734	9.884 0418	177	0	58
	10	9.808 3935	251	9.924 3693	428	0.075 6307	9.884 0241	176	50	
	20	9.808 4186	250	9.924 4121	427	0.075 5879	9.884 0065	177	40	
	30	9.808 4436	251	9.924 4548	428	0.075 5452	9.883 9888	177	30	
	40	9.808 4687	250	9.924 4976	427	0.075 5024	9.883 9711	177	20	
	50	9.808 4937	251	9.924 5403	428	0.075 4597	9.883 9534	177	10	
3	0	9.808 5188	250	9.924 5831	427	0.075 4169	9.883 9357	177	0	57
	10	9.808 5438	251	9.924 6258	428	0.075 3742	9.883 9180	177	50	
	20	9.808 5689	250	9.924 6686	427	0.075 3314	9.883 9003	177	40	
	30	9.808 5939	250	9.924 7113	428	0.075 2887	9.883 8826	177	30	
	40	9.808 6189	251	9.924 7541	427	0.075 2459	9.883 8649	177	20	
	50	9.808 6440	250	9.924 7968	428	0.075 2032	9.883 8472	178	10	
4	0	9.808 6690	250	9.924 8396	427	0.075 1604	9.883 8294	177	0	56
	10	9.808 6940	251	9.924 8823	427	0.075 1177	9.883 8117	177	50	
	20	9.808 7191	250	9.924 9250	428	0.075 0750	9.883 7940	177	40	
	30	9.808 7441	250	9.924 9678	427	0.075 0322	9.883 7763	177	30	
	40	9.808 7691	250	9.925 0105	428	0.074 9895	9.883 7586	177	20	
	50	9.808 7941	251	9.925 0533	427	0.074 9467	9.883 7409	177	10	
5	0	9.808 8192	250	9.925 0960	427	0.074 9040	9.883 7232	178	0	55
	10	9.808 8442	250	9.925 1387	428	0.074 8613	9.883 7054	177	50	
	20	9.808 8692	250	9.925 1815	427	0.074 8185	9.883 6877	177	40	
	30	9.808 8942	250	9.925 2242	428	0.074 7758	9.883 6700	177	30	
	40	9.808 9192	250	9.925 2670	427	0.074 7330	9.883 6523	178	20	
	50	9.808 9442	250	9.925 3097	427	0.074 6903	9.883 6345	177	10	
6	0	9.808 9692	250	9.925 3524	428	0.074 6476	9.883 6168	177	0	54
	10	9.808 9942	250	9.925 3952	427	0.074 6048	9.883 5991	178	50	
	20	9.809 0192	250	9.925 4379	427	0.074 5621	9.883 5813	177	40	
	30	9.809 0442	250	9.925 4806	427	0.074 5194	9.883 5636	177	30	
	40	9.809 0692	250	9.925 5233	428	0.074 4767	9.883 5459	178	20	
	50	9.809 0942	250	9.925 5661	427	0.074 4339	9.883 5281	177	10	
7	0	9.809 1192	250	9.925 6088	427	0.074 3912	9.883 5104	177	0	53
	10	9.809 1442	250	9.925 6515	428	0.074 3485	9.883 4927	178	50	
	20	9.809 1692	250	9.925 6943	427	0.074 3057	9.883 4749	177	40	
	30	9.809 1942	249	9.925 7370	427	0.074 2630	9.883 4572	178	30	
	40	9.809 2191	250	9.925 7797	428	0.074 2203	9.883 4394	177	20	
	50	9.809 2441	250	9.925 8225	427	0 074 1775	9.883 4217	178	10	
8	0	9.809 2691	250	9.925 8652	427	0.074 1348	9.883 4039	177	0	52
	10	9.809 2941	249	9.925 9079	427	0.074 0921	9.883 3862	178	50	
	20	9.809 3190	250	9.925 9506	427	0.074 0494	9.883 3684	177	40	
	30	9.809 3440	250	9.925 9933	428	0.074 0067	9.883 3507	178	30	
	40	9.809 3690	249	9.926 0361	427	0.073 9639	9.883 3329	178	20	
	50	9.809 3939	250	9.926 0788	427	0.073 9212	9.883 3151	177	10	
9	0	9.809 4189	250	9.926 1215	427	0.073 8785	9.883 2974	178	0	51
	10	9.809 4439	249	9.926 1642	428	0.073 8358	9.883 2796	177	50	
	20	9.809 4688	250	9.926 2070	427	0.073 7930	9.883 2619	178	40	
	30	9.809 4938	249	9.926 2497	427	0.073 7503	9.883 2441	178	30	
	40	9.809 5187	250	9.926 2924	427	0.073 7076	9.883 2263	177	20	
	50	9.809 5437	249	9.926 3351	427	0.073 6649	9.883 2086	178	10	
10	0	9.809 5686		9.926 3778		0.073 6222	9.883 1908		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

49°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.809 5686	250	9.926 3778	427	0.073 6222	9.883 1908	178	0	50
	10	9.809 5936	249	9.926 4205	428	0.073 5795	9.883 1730	178	50	
	20	9.809 6185	249	9.926 4633	427	0.073 5367	9.883 1552	177	40	
	30	9.809 6434	250	9.926 5060	427	0.073 4940	9.883 1375	178	30	
	40	9.809 6684	249	9.926 5487	427	0.073 4513	9.883 1197	178	20	
	50	9.809 6933	249	9.926 5914	427	0.073 4086	9.883 1019	178	10	
11	0	9.809 7182	250	9.926 6341	427	0.073 3659	9.883 0841	178	0	49
	10	9.809 7432	249	9.926 6768	427	0.073 3232	9.883 0663	177	50	
	20	9.809 7681	249	9.926 7195	428	0.073 2805	9.883 0486	178	40	
	30	9.809 7930	249	9.926 7623	427	0.073 2377	9.883 0308	178	30	
	40	9.809 8179	250	9.926 8050	427	0.073 1950	9.883 0130	178	20	
	50	9.809 8429	249	9.926 8477	427	0.073 1523	9.882 9952	178	10	
12	0	9.809 8678	249	9.926 8904	427	0.073 1096	9.882 9774	178	0	48
	10	9.809 8927	249	9.926 9331	427	0.073 0669	9.882 9596	178	50	
	20	9.809 9176	249	9.926 9758	427	0.073 0242	9.882 9418	178	40	
	30	9.809 9425	249	9.927 0185	427	0.072 9815	9.882 9240	178	30	
	40	9.809 9674	249	9.927 0612	427	0.072 9388	9.882 9062	178	20	
	50	9.809 9923	249	9.927 1039	427	0.072 8961	9.882 8884	178	10	
13	0	9.810 0172	249	9.927 1466	427	0.072 8534	9.882 8706	178	0	47
	10	9.810 0421	249	9.927 1893	427	0.072 8107	9.882 8528	178	50	
	20	9.810 0670	249	9.927 2320	427	0.072 7680	9.882 8350	178	40	
	30	9.810 0919	249	9.927 2747	427	0.072 7253	9.882 8172	178	30	
	40	9.810 1168	249	9.927 3174	427	0.072 6826	9.882 7994	178	20	
	50	9.810 1417	249	9.927 3601	427	0.072 6399	9.882 7816	178	10	
14	0	9.810 1666	249	9.927 4028	427	0.072 5972	9.882 7638	179	0	46
	10	9.810 1915	249	9.927 4455	427	0.072 5545	9.882 7459	178	50	
	20	9.810 2164	248	9.927 4882	427	0.072 5118	9.882 7281	178	40	
	30	9.810 2412	249	9.927 5309	427	0.072 4691	9.882 7103	178	30	
	40	9.810 2661	249	9.927 5736	427	0.072 4264	9.882 6925	178	20	
	50	9.810 2910	249	9.927 6163	427	0.072 3837	9.882 6747	179	10	
15	0	9.810 3159	248	9.927 6590	427	0.072 3410	9.882 6568	178	0	45
	10	9.810 3407	249	9.927 7017	427	0.072 2983	9.882 6390	178	50	
	20	9.810 3656	249	9.927 7444	427	0.072 2556	9.882 6212	178	40	
	30	9.810 3905	248	9.927 7871	427	0.072 2129	9.882 6034	179	30	
	40	9.810 4153	249	9.927 8298	427	0.072 1702	9.882 5855	178	20	
	50	9.810 4402	248	9.927 8725	427	0.072 1275	9.882 5677	178	10	
16	0	9.810 4650	249	9.927 9152	427	0.072 0848	9.882 5499	179	0	44
	10	9.810 4899	249	9.927 9579	427	0.072 0421	9.882 5320	178	50	
	20	9.810 5148	248	9.928 0006	427	0.071 9994	9.882 5142	179	40	
	30	9.810 5396	249	9.928 0433	426	0.071 9567	9.882 4963	178	30	
	40	9.810 5645	248	9.928 0859	427	0.071 9141	9.882 4785	178	20	
	50	9.810 5893	248	9.928 1286	427	0.071 8714	9.882 4607	179	10	
17	0	9.810 6141	249	9.928 1713	427	0.071 8287	9.882 4428	178	0	43
	10	9.810 6390	248	9.928 2140	427	0.071 7860	9.882 4250	179	50	
	20	9.810 6638	249	9.928 2567	427	0.071 7433	9.882 4071	178	40	
	30	9.810 6887	248	9.928 2994	427	0.071 7006	9.882 3893	179	30	
	40	9.810 7135	248	9.928 3421	427	0.071 6579	9.882 3714	178	20	
	50	9.810 7383	248	9.928 3848	426	0.071 6152	9.882 3536	179	10	
18	0	9.810 7631	249	9.928 4274	427	0.071 5726	9.882 3357	178	0	42
	10	9.810 7880	248	9.928 4701	427	0.071 5299	9.882 3179	179	50	
	20	9.810 8128	248	9.928 5128	427	0.071 4872	9.882 3000	179	40	
	30	9.810 8376	248	9.928 5555	427	0.071 4445	9.882 2821	178	30	
	40	9.810 8624	249	9.928 5982	426	0.071 4018	9.882 2643	179	20	
	50	9.810 8873	248	9.928 6408	427	0.071 3592	9.882 2464	179	10	
19	0	9.810 9121	248	9.928 6835	427	0.071 3165	9.882 2285	178	0	41
	10	9.810 9369	248	9.928 7262	427	0.071 2738	9.882 2107	179	50	
	20	9.810 9617	248	9.928 7689	427	0.071 2311	9.882 1928	179	40	
	30	9.810 9865	248	9.928 8116	426	0.071 1884	9.882 1749	178	30	
	40	9.811 0113	248	9.928 8542	427	0.071 1458	9.882 1571	179	20	
	50	9.811 0361	248	9.928 8969	427	0.071 1031	9.882 1392	179	10	
20	0	9.811 0609		9.928 9396		0.071 0604	9.882 1213		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	427
1	42.7
2	85.4
3	128.1
4	170.8
5	213.5
6	256.2
7	298.9
8	341.6
9	384.3

	426
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

	249
1	24.9
2	49.8
3	74.7
4	99.6
5	124.5
6	149.4
7	174.3
8	199.2
9	224.1

	248
1	24.8
2	49.6
3	74.4
4	99.2
5	124.0
6	148.8
7	173.6
8	198.4
9	223.2

	178
1	17.8
2	35.6
3	53.4
4	71.2
5	89.0
6	106.8
7	124.6
8	142.4
9	160.2

	179
1	17.9
2	35.8
3	53.7
4	71.6
5	89.5
6	107.4
7	125.3
8	143.2
9	161.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.811 0609	248	9.928 9396	427	0.071 0604	9.882 1213	179	0	40
	10	9.811 0857	248	9.928 9823	426	0.071 0177	9.882 1034	178	50	
	20	9.811 1105	248	9.929 0249	427	0.070 9751	9.882 0856	179	40	
	30	9.811 1353	248	9.929 0676	427	0.070 9324	9.882 0677	179	30	
	40	9.811 1601	248	9.929 1103	427	0.070 8897	9.882 0498	179	20	
	50	9.811 1849	247	9.929 1530	426	0.070 8470	9.882 0319	179	10	
21	0	9.811 2096	248	9.929 1956	427	0.070 8044	9.882 0140	179	0	39
	10	9.811 2344	248	9.929 2383	427	0.070 7617	9.881 9961	179	50	
	20	9.811 2592	248	9.929 2810	426	0.070 7190	9.881 9782	179	40	
	30	9.811 2840	248	9.929 3236	427	0.070 6764	9.881 9603	178	30	
	40	9.811 3088	247	9.929 3663	427	0.070 6337	9.881 9425	179	20	
	50	9.811 3335	248	9.929 4090	426	0.070 5910	9.881 9246	179	10	
22	0	9.811 3583	248	9.929 4516	427	0.070 5484	9.881 9067	179	0	38
	10	9.811 3831	247	9.929 4943	427	0.070 5057	9.881 8888	179	50	
	20	9.811 4078	248	9.929 5370	426	0.070 4630	9.881 8709	179	40	
	30	9.811 4326	248	9.929 5796	427	0.070 4204	9.881 8530	179	30	
	40	9.811 4574	247	9.929 6223	427	0.070 3777	9.881 8351	180	20	
	50	9.811 4821	248	9.929 6650	426	0.070 3350	9.881 8171	179	10	
23	0	9.811 5069	247	9.929 7076	427	0.070 2924	9.881 7992	179	0	37
	10	9.811 5316	248	9.929 7503	427	0.070 2497	9.881 7813	179	50	
	20	9.811 5564	247	9.929 7930	426	0.070 2070	9.881 7634	179	40	
	30	9.811 5811	248	9.929 8356	427	0.070 1644	9.881 7455	179	30	
	40	9.811 6059	247	9.929 8783	426	0.070 1217	9.881 7276	179	20	
	50	9.811 6306	248	9.929 9209	427	0.070 0791	9.881 7097	179	10	
24	0	9.811 6554	247	9.929 9636	427	0.070 0364	9.881 6918	180	0	36
	10	9.811 6801	247	9.930 0063	426	0.069 9937	9.881 6738	179	50	
	20	9.811 7048	248	9.930 0489	427	0.069 9511	9.881 6559	179	40	
	30	9.811 7296	247	9.930 0916	426	0.069 9084	9.881 6380	179	30	
	40	9.811 7543	247	9.930 1342	427	0.069 8658	9.881 6201	180	20	
	50	9.811 7790	248	9.930 1769	426	0.069 8231	9.881 6021	179	10	
25	0	9.811 8038	247	9.930 2195	427	0.069 7805	9.881 5842	179	0	35
	10	9.811 8285	247	9.930 2622	427	0.069 7378	9.881 5663	180	50	
	20	9.811 8532	247	9.930 3049	426	0.069 6951	9.881 5483	179	40	
	30	9.811 8779	247	9.930 3475	427	0.069 6525	9.881 5304	179	30	
	40	9.811 9026	247	9.930 3902	426	0.069 6098	9.881 5125	180	20	
	50	9.811 9273	248	9.930 4328	427	0.069 5672	9.881 4945	179	10	
26	0	9.811 9521	247	9.930 4755	426	0.069 5245	9.881 4766	179	0	34
	10	9.811 9768	247	9.930 5181	427	0.069 4819	9.881 4587	180	50	
	20	9.812 0015	247	9.930 5608	426	0.069 4392	9.881 4407	179	40	
	30	9.812 0262	247	9.930 6034	427	0.069 3966	9.881 4228	180	30	
	40	9.812 0509	247	9.930 6461	426	0.069 3539	9.881 4048	179	20	
	50	9.812 0756	247	9.930 6887	427	0.069 3113	9.881 3869	180	10	
27	0	9.812 1003	247	9.930 7314	426	0.069 2686	9.881 3689	179	0	33
	10	9.812 1250	247	9.930 7740	427	0.069 2260	9.881 3510	180	50	
	20	9.812 1497	247	9.930 8167	426	0.069 1833	9.881 3330	179	40	
	30	9.812 1744	246	9.930 8593	426	0.069 1407	9.881 3151	180	30	
	40	9.812 1990	247	9.930 9019	427	0.069 0981	9.881 2971	180	20	
	50	9.812 2237	247	9.930 9446	426	0.069 0554	9.881 2791	179	10	
28	0	9.812 2484	247	9.930 9872	427	0.069 0128	9.881 2612	180	0	32
	10	9.812 2731	247	9.931 0299	426	0.068 9701	9.881 2432	179	50	
	20	9.812 2978	246	9.931 0725	427	0.068 9275	9.881 2253	180	40	
	30	9.812 3224	247	9.931 1152	426	0.068 8848	9.881 2073	180	30	
	40	9.812 3471	247	9.931 1578	426	0.068 8422	9.881 1893	179	20	
	50	9.812 3718	247	9.931 2004	427	0.068 7996	9.881 1714	180	10	
29	0	9.812 3965	246	9.931 2431	426	0.068 7569	9.881 1534	180	0	31
	10	9.812 4211	247	9.931 2857	427	0.068 7143	9.881 1354	180	50	
	20	9.812 4458	246	9.931 3284	426	0.068 6716	9.881 1174	179	40	
	30	9.812 4704	247	9.931 3710	426	0.068 6290	9.881 0995	180	30	
	40	9.812 4951	247	9.931 4136	427	0.068 5864	9.881 0815	180	20	
	50	9.812 5198	246	9.931 4563	426	0.068 5437	9.881 0635	180	10	
30	0	9.812 5444		9.931 4989		0.068 5011	9.881 0455		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

	427
1	42.7
2	85.4
3	128.1
4	170.8
5	213.5
6	256.2
7	298.9
8	341.6
9	384.3

	426
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

	248
1	24.8
2	49.6
3	74.4
4	99.2
5	124.0
6	148.8
7	173.6
8	198.4
9	223.2

	247
1	24.7
2	49.4
3	74.1
4	98.8
5	123.5
6	148.2
7	172.9
8	197.6
9	222.3

	178
1	17.8
2	35.6
3	53.4
4	71.2
5	89.0
6	106.8
7	124.6
8	142.4
9	160.2

	179
1	17.9
2	35.8
3	53.7
4	71.6
5	89.5
6	107.4
7	125.3
8	143.2
9	161.1

40°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.812 5444	247	9.931 4989	426	0.068 5011	9.881 0455	180	0	30
	10	9.812 5691	246	9.931 5415	427	0.068 4585	9.881 0275	180	50	
	20	9.812 5937	247	9.931 5842	426	0.068 4158	9.881 0095	179	40	
	30	9.812 6184	246	9.931 6268	426	0.068 3732	9.880 9916	180	30	
	40	9.812 6430	246	9.931 6694	427	0.068 3306	9.880 9736	180	20	
	50	9.812 6676	247	9.931 7121	426	0.068 2879	9.880 9556	180	10	
31	0	9.812 6923	246	9.931 7547	426	0.068 2453	9.880 9376	180	0	29
	10	9.812 7169	247	9.931 7973	427	0.068 2027	9.880 9196	180	50	
	20	9.812 7416	246	9.931 8400	426	0.068 1600	9.880 9016	180	40	
	30	9.812 7662	246	9.931 8826	426	0.068 1174	9.880 8836	180	30	
	40	9.812 7908	246	9.931 9252	426	0.068 0748	9.880 8656	180	20	
	50	9.812 8154	247	9.931 9678	427	0.068 0322	9.880 8476	180	10	
32	0	9.812 8401	246	9.932 0105	426	0.067 9895	9.880 8296	180	0	28
	10	9.812 8647	246	9.932 0531	426	0.067 9469	9.880 8116	180	50	
	20	9.812 8893	246	9.932 0957	427	0.067 9043	9.880 7936	180	40	
	30	9.812 9139	246	9.932 1384	426	0.067 8616	9.880 7756	180	30	
	40	9.812 9385	247	9.932 1810	426	0.067 8190	9.880 7576	180	20	
	50	9.812 9632	246	9.932 2236	426	0.067 7764	9.880 7396	181	10	
33	0	9.812 9878	246	9.932 2662	427	0.067 7338	9.880 7215	180	0	27
	10	9.813 0124	246	9.932 3089	426	0.067 6911	9.880 7035	180	50	
	20	9.813 0370	246	9.932 3515	426	0.067 6485	9.880 6855	180	40	
	30	9.813 0616	246	9.932 3941	426	0.067 6059	9.880 6675	180	30	
	40	9.813 0862	246	9.932 4367	426	0.067 5633	9.880 6495	181	20	
	50	9.813 1108	246	9.932 4793	427	0.067 5207	9.880 6314	180	10	
34	0	9.813 1354	246	9.932 5220	426	0.067 4780	9.880 6134	180	0	26
	10	9.813 1600	246	9.932 5646	426	0.067 4354	9.880 5954	180	50	
	20	9.813 1846	246	9.932 6072	426	0.067 3928	9.880 5774	181	40	
	30	9.813 2092	245	9.932 6498	426	0.067 3502	9.880 5593	180	30	
	40	9.813 2337	246	9.932 6924	427	0.067 3076	9.880 5413	180	20	
	50	9.813 2583	246	9.932 7351	426	0.067 2649	9.880 5233	181	10	
35	0	9.813 2829	246	9.932 7777	426	0.067 2223	9.880 5052	180	0	25
	10	9.813 3075	246	9.932 8203	426	0.067 1797	9.880 4872	180	50	
	20	9.813 3321	245	9.932 8629	426	0.067 1371	9.880 4692	181	40	
	30	9.813 3566	246	9.932 9055	426	0.067 0945	9.880 4511	180	30	
	40	9.813 3812	246	9.932 9481	426	0.067 0519	9.880 4331	181	20	
	50	9.813 4058	245	9.932 9907	427	0.067 0093	9.880 4150	180	10	
36	0	9.813 4303	246	9.933 0334	426	0.066 9666	9.880 3970	181	0	24
	10	9.813 4549	246	9.933 0760	426	0.066 9240	9.880 3789	180	50	
	20	9.813 4795	245	9.933 1186	426	0.066 8814	9.880 3609	181	40	
	30	9.813 5040	246	9.933 1612	426	0.066 8388	9.880 3428	180	30	
	40	9.813 5286	245	9.933 2038	426	0.066 7962	9.880 3248	181	20	
	50	9.813 5531	246	9.933 2464	426	0.066 7536	9.880 3067	180	10	
37	0	9.813 5777	245	9.933 2890	426	0.066 7110	9.880 2887	181	0	23
	10	9.813 6022	246	9.933 3316	426	0.066 6684	9.880 2706	180	50	
	20	9.813 6268	245	9.933 3742	426	0.066 6258	9.880 2526	181	40	
	30	9.813 6513	246	9.933 4168	426	0.066 5832	9.880 2345	181	30	
	40	9.813 6759	245	9.933 4594	426	0.066 5406	9.880 2164	180	20	
	50	9.813 7004	246	9.933 5020	426	0.066 4980	9.880 1984	181	10	
38	0	9.813 7250	245	9.933 5446	427	0.066 4554	9.880 1803	181	0	22
	10	9.813 7495	245	9.933 5873	426	0.066 4127	9.880 1622	180	50	
	20	9.813 7740	246	9.933 6299	426	0.066 3701	9.880 1442	181	40	
	30	9.813 7986	245	9.933 6725	426	0.066 3275	9.880 1261	181	30	
	40	9.813 8231	245	9.933 7151	426	0.066 2849	9.880 1080	181	20	
	50	9.813 8476	245	9.933 7577	426	0.066 2423	9.880 0899	180	10	
39	0	9.813 8721	245	9.933 8003	426	0.066 1997	9.880 0719	181	0	21
	10	9.813 8966	246	9.933 8429	426	0.066 1571	9.880 0538	181	50	
	20	9.813 9212	245	9.933 8855	426	0.066 1145	9.880 0357	181	40	
	30	9.813 9457	245	9.933 9281	426	0.066 0719	9.880 0176	181	30	
	40	9.813 9702	245	9.933 9707	426	0.066 0293	9.879 9995	180	20	
	50	9.813 9947	245	9.934 0133	426	0.065 9867	9.879 9815	181	10	
40	0	9.814 0192		9.934 0559		0.065 9441	9.879 9634		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

49°

	427
1	42.7
2	85.4
3	128.1
4	170.8
5	213.5
6	256.2
7	298.9
8	341.6
9	384.3

	426
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

	246
1	24.6
2	49.2
3	73.8
4	98.4
5	123.0
6	147.6
7	172.2
8	196.8
9	221.4

	245
1	24.5
2	49.0
3	73.5
4	98.0
5	122.5
6	147.0
7	171.5
8	196.0
9	220.5

	180
1	18.0
2	36.0
3	54.0
4	72.0
5	90.0
6	108.0
7	126.0
8	144.0
9	162.0

	181
1	18.1
2	36.2
3	54.3
4	72.4
5	90.5
6	108.6
7	126.7
8	144.8
9	162.9

40°

426	
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

425	
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

245	
1	24.5
2	49.0
3	73.5
4	98.0
5	122.5
6	147.0
7	171.5
8	196.0
9	220.5

244	
1	24.4
2	48.8
3	73.2
4	97.6
5	122.0
6	146.4
7	170.8
8	195.2
9	219.6

181	
1	18.1
2	36.2
3	54.3
4	72.4
5	90.5
6	108.6
7	126.7
8	144.8
9	162.9

182	
1	18.2
2	36.4
3	54.6
4	72.8
5	91.0
6	109.2
7	127.4
8	145.6
9	163.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.814 0192	245	9.934 0559	426	0.065 9441	9.879 9634	181	0	20
	10	9.814 0437	245	9.934 0985	425	0.065 9015	9.879 9453	181	50	
	20	9.814 0682	245	9.934 1410	426	0.065 8590	9.879 9272	181	40	
	30	9.814 0927	245	9.934 1836	426	0.065 8164	9.879 9091	181	30	
	40	9.814 1172	245	9.934 2262	426	0.065 7738	9.879 8910	181	20	
	50	9.814 1417	245	9.934 2688	426	0.065 7312	9.879 8729	181	10	
41	0	9.814 1662	245	9.934 3114	426	0.065 6886	9.879 8548	181	0	19
	10	9.814 1907	245	9.934 3540	426	0.065 6460	9.879 8367	181	50	
	20	9.814 2152	245	9.934 3966	426	0.065 6034	9.879 8186	181	40	
	30	9.814 2397	245	9.934 4392	426	0.065 5608	9.879 8005	181	30	
	40	9.814 2642	245	9.934 4818	426	0.065 5182	9.879 7824	181	20	
	50	9.814 2887	244	9.934 5244	426	0.065 4756	9.879 7643	181	10	
42	0	9.814 3131	245	9.934 5670	426	0.065 4330	9.879 7462	181	0	18
	10	9.814 3376	245	9.934 6096	425	0.065 3904	9.879 7281	182	50	
	20	9.814 3621	245	9.934 6521	426	0.065 3479	9.879 7099	181	40	
	30	9.814 3866	244	9.934 6947	426	0.065 3053	9.879 6918	181	30	
	40	9.814 4110	245	9.934 7373	426	0.065 2627	9.879 6737	181	20	
	50	9.814 4355	245	9.934 7799	426	0.065 2201	9.879 6556	181	10	
43	0	9.814 4600	244	9.934 8225	426	0.065 1775	9.879 6375	181	0	17
	10	9.814 4844	245	9.934 8651	426	0.065 1349	9.879 6194	182	50	
	20	9.814 5089	245	9.934 9077	425	0.065 0923	9.879 6012	181	40	
	30	9.814 5334	244	9.934 9502	426	0.065 0498	9.879 5831	181	30	
	40	9.814 5578	245	9.934 9928	426	0.065 0072	9.879 5650	182	20	
	50	9.814 5823	244	9.935 0354	426	0.064 9646	9.879 5468	181	10	
44	0	9.814 6067	245	9.935 0780	426	0.064 9220	9.879 5287	181	0	16
	10	9.814 6312	244	9.935 1206	426	0.064 8794	9.879 5106	182	50	
	20	9.814 6556	245	9.935 1632	425	0.064 8368	9.879 4924	181	40	
	30	9.814 6801	244	9.935 2057	426	0.064 7943	9.879 4743	181	30	
	40	9.814 7045	244	9.935 2483	426	0.064 7517	9.879 4562	182	20	
	50	9.814 7289	245	9.935 2909	426	0.064 7091	9.879 4380	181	10	
45	0	9.814 7534	244	9.935 3335	426	0.064 6665	9.879 4199	182	0	15
	10	9.814 7778	244	9.935 3761	425	0.064 6239	9.879 4017	181	50	
	20	9.814 8022	245	9.935 4186	426	0.064 5814	9.879 3836	181	40	
	30	9.814 8267	244	9.935 4612	426	0.064 5388	9.879 3655	182	30	
	40	9.814 8511	244	9.935 5038	426	0.064 4962	9.879 3473	181	20	
	50	9.814 8755	244	9.935 5464	425	0.064 4536	9.879 3292	182	10	
46	0	9.814 8999	245	9.935 5889	426	0.064 4111	9.879 3110	181	0	14
	10	9.814 9244	244	9.935 6315	426	0.064 3685	9.879 2929	182	50	
	20	9.814 9488	244	9.935 6741	426	0.064 3259	9.879 2747	182	40	
	30	9.814 9732	244	9.935 7167	425	0.064 2833	9.879 2565	181	30	
	40	9.814 9976	244	9.935 7592	426	0.064 2408	9.879 2384	182	20	
	50	9.815 0220	244	9.935 8018	426	0.064 1982	9.879 2202	181	10	
47	0	9.815 0464	244	9.935 8444	425	0.064 1556	9.879 2021	182	0	13
	10	9.815 0708	244	9.935 8869	426	0.064 1131	9.879 1839	182	50	
	20	9.815 0952	244	9.935 9295	426	0.064 0705	9.879 1657	181	40	
	30	9.815 1196	244	9.935 9721	425	0.064 0279	9.879 1476	182	30	
	40	9.815 1440	244	9.936 0146	426	0.063 9854	9.879 1294	182	20	
	50	9.815 1684	244	9.936 0572	426	0.063 9428	9.879 1112	182	10	
48	0	9.815 1928	244	9.936 0998	425	0.063 9002	9.879 0930	181	0	12
	10	9.815 2172	244	9.936 1423	426	0.063 8577	9.879 0749	182	50	
	20	9.815 2416	244	9.936 1849	426	0.063 8151	9.879 0567	182	40	
	30	9.815 2660	244	9.936 2275	425	0.063 7725	9.879 0385	182	30	
	40	9.815 2904	244	9.936 2700	426	0.063 7300	9.879 0203	182	20	
	50	9.815 3148	243	9.936 3126	426	0.063 6874	9.879 0021	181	10	
49	0	9.815 3391	244	9.936 3552	425	0.063 6448	9.878 9840	182	0	11
	10	9.815 3635	244	9.936 3977	426	0.063 6023	9.878 9658	182	50	
	20	9.815 3879	244	9.936 4403	426	0.063 5597	9.878 9476	182	40	
	30	9.815 4123	243	9.936 4829	425	0.063 5171	9.878 9294	182	30	
	40	9.815 4366	244	9.936 5254	426	0.063 4746	9.878 9112	182	20	
	50	9.815 4610	244	9.936 5680	425	0.063 4320	9.878 8930	182	10	
50	0	9.815 4854		9.936 6105		0.063 3895	9.878 8748		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

49°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.815 4854	243	9.936 6105	426	0.063 3895	9.878 8748	182	0	10
	10	9.815 5097	244	9.936 6531	426	0.063 3469	9.878 8566	182	50	
	20	9.815 5341	243	9.936 6957	425	0.063 3043	9.878 8384	182	40	
	30	9.815 5584	244	9.936 7382	426	0.063 2618	9.878 8202	182	30	
	40	9.815 5828	244	9.936 7808	425	0.063 2192	9.878 8020	182	20	
	50	9.815 6072	243	9.936 8233	426	0.063 1767	9.878 7838	182	10	
51	0	9.815 6315	244	9.936 8659	425	0.063 1341	9.878 7656	182	0	9
	10	9.815 6559	243	9.936 9084	426	0.063 0916	9.878 7474	182	50	
	20	9.815 6802	243	9.936 9510	426	0.063 0490	9.878 7292	182	40	
	30	9.815 7045	244	9.936 9936	425	0.063 0064	9.878 7110	182	30	
	40	9.815 7289	243	9.937 0361	426	0.062 9639	9.878 6928	182	20	
	50	9.815 7532	244	9.937 0787	425	0.062 9213	9.878 6746	183	10	
52	0	9.815 7776	243	9.937 1212	426	0.062 8788	9.878 6563	182	0	8
	10	9.815 8019	243	9.937 1638	425	0.062 8362	9.878 6381	182	50	
	20	9.815 8262	244	9.937 2063	426	0.062 7937	9.878 6199	182	40	
	30	9.815 8506	243	9.937 2489	425	0.062 7511	9.878 6017	182	30	
	40	9.815 8749	243	9.937 2914	426	0.062 7086	9.878 5835	183	20	
	50	9.815 8992	243	9.937 3340	425	0.062 6660	9.878 5652	182	10	
53	0	9.815 9235	244	9.937 3765	426	0.062 6235	9.878 5470	182	0	7
	10	9.815 9479	243	9.937 4191	425	0.062 5809	9.878 5288	182	50	
	20	9.815 9722	243	9.937 4616	426	0.062 5384	9.878 5106	183	40	
	30	9.815 9965	243	9.937 5042	425	0.062 4958	9.878 4923	182	30	
	40	9.816 0208	243	9.937 5467	426	0.062 4533	9.878 4741	183	20	
	50	9.816 0451	243	9.937 5893	425	0.062 4107	9.878 4558	182	10	
54	0	9.816 0694	243	9.937 6318	425	0.062 3682	9.878 4376	182	0	6
	10	9.816 0937	243	9.937 6743	426	0.062 3257	9.878 4194	183	50	
	20	9.816 1180	243	9.937 7169	425	0.062 2831	9.878 4011	182	40	
	30	9.816 1423	243	9.937 7594	426	0.062 2406	9.878 3829	183	30	
	40	9.816 1666	243	9.937 8020	425	0.062 1980	9.878 3646	182	20	
	50	9.816 1909	243	9.937 8445	426	0.062 1555	9.878 3464	183	10	
55	0	9.816 2152	243	9.937 8871	425	0.062 1129	9.878 3281	182	0	5
	10	9.816 2395	243	9.937 9296	425	0.062 0704	9.878 3099	183	50	
	20	9.816 2638	243	9.937 9721	426	0.062 0279	9.878 2916	182	40	
	30	9.816 2881	243	9.938 0147	425	0.061 9853	9.878 2734	183	30	
	40	9.816 3124	242	9.938 0572	426	0.061 9428	9.878 2551	182	20	
	50	9.816 3366	243	9.938 0998	425	0.061 9002	9.878 2369	183	10	
56	0	9.816 3609	243	9.938 1423	425	0.061 8577	9.878 2186	182	0	4
	10	9.816 3852	243	9.938 1848	426	0.061 8152	9.878 2004	183	50	
	20	9.816 4095	242	9.938 2274	425	0.061 7726	9.878 1821	183	40	
	30	9.816 4337	243	9.938 2699	426	0.061 7301	9.878 1638	182	30	
	40	9.816 4580	243	9.938 3125	425	0.061 6875	9.878 1456	183	20	
	50	9.816 4823	243	9.938 3550	425	0.061 6450	9.878 1273	183	10	
57	0	9.816 5066	242	9.938 3975	426	0.061 6025	9.878 1090	182	0	3
	10	9.816 5308	243	9.938 4401	425	0.061 5599	9.878 0908	183	50	
	20	9.816 5551	242	9.938 4826	425	0.061 5174	9.878 0725	183	40	
	30	9.816 5793	243	9.938 5251	426	0.061 4749	9.878 0542	183	30	
	40	9.816 6036	242	9.938 5677	425	0.061 4323	9.878 0359	182	20	
	50	9.816 6278	243	9.938 6102	425	0.061 3898	9.878 0177	183	10	
58	0	9.816 6521	242	9.938 6527	426	0.061 3473	9.877 9994	183	0	2
	10	9.816 6763	243	9.938 6953	425	0.061 3047	9.877 9811	183	50	
	20	9.816 7006	242	9.938 7378	425	0.061 2622	9.877 9628	183	40	
	30	9.816 7248	243	9.938 7803	425	0.061 2197	9.877 9445	183	30	
	40	9.816 7491	242	9.938 8228	426	0.061 1772	9.877 9262	183	20	
	50	9.816 7733	242	9.938 8654	425	0.061 1346	9.877 9079	183	10	
59	0	9.816 7975	243	9.938 9079	425	0.061 0921	9.877 8896	182	0	1
	10	9.816 8218	242	9.938 9504	426	0.061 0496	9.877 8714	183	50	
	20	9.816 8460	242	9.938 9930	425	0.061 0070	9.877 8531	183	40	
	30	9.816 8702	243	9.939 0355	425	0.060 9645	9.877 8348	183	30	
	40	9.816 8945	242	9.939 0780	425	0.060 9220	9.877 8165	183	20	
	50	9.816 9187	242	9.939 1205	426	0.060 8795	9.877 7982	183	10	
60	0	9.816 9429		9.939 1631		0.060 8369	9.877 7799		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

49°

	426
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

	425
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

	243
1	24.3
2	48.6
3	72.9
4	97.2
5	121.5
6	145.8
7	170.1
8	194.4
9	218.7

	242
1	24.2
2	48.4
3	72.6
4	96.8
5	121.0
6	145.2
7	169.4
8	193.6
9	217.8

	182
1	18.2
2	36.4
3	54.6
4	72.8
5	91.0
6	109.2
7	127.4
8	145.6
9	163.8

	183
1	18.3
2	36.6
3	54.9
4	73.2
5	91.5
6	109.8
7	128.1
8	146.4
9	164.7

41°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.816 9429	242	9.939 1631	425	0.060 8369	9.877 7799	183	0	60
	10	9.816 9671	243	9.939 2056	425	0.060 7944	9.877 7616	183	50	
	20	9.816 9914	242	9.939 2481	425	0.060 7519	9.877 7433	184	40	
	30	9.817 0156	242	9.939 2906	425	0.060 7094	9.877 7249	183	30	
	40	9.817 0398	242	9.939 3331	426	0.060 6669	9.877 7066	183	20	
	50	9.817 0640	242	9.939 3757	425	0.060 6243	9.877 6883	183	10	
1	0	9.817 0882	242	9.939 4182	425	0.060 5818	9.877 6700	183	0	59
	10	9.817 1124	242	9.939 4607	425	0.060 5393	9.877 6517	183	50	
	20	9.817 1366	242	9.939 5032	425	0.060 4968	9.877 6334	183	40	
	30	9.817 1608	242	9.939 5457	426	0.060 4543	9.877 6151	184	30	
	40	9.817 1850	242	9.939 5883	425	0.060 4117	9.877 5967	183	20	
	50	9.817 2092	242	9.939 6308	425	0.060 3692	9.877 5784	183	10	
2	0	9.817 2334	242	9.939 6733	425	0.060 3267	9.877 5601	183	0	58
	10	9.817 2576	242	9.939 7158	425	0.060 2842	9.877 5418	184	50	
	20	9.817 2818	242	9.939 7583	426	0.060 2417	9.877 5234	183	40	
	30	9.817 3060	242	9.939 8009	425	0.060 1991	9.877 5051	183	30	
	40	9.817 3302	241	9.939 8434	425	0.060 1566	9.877 4868	183	20	
	50	9.817 3543	242	9.939 8859	425	0.060 1141	9.877 4685	184	10	
3	0	9.817 3785	242	9.939 9284	425	0.060 0716	9.877 4501	183	0	57
	10	9.817 4027	242	9.939 9709	425	0.060 0291	9.877 4318	184	50	
	20	9.817 4269	241	9.940 0134	425	0.059 9866	9.877 4134	183	40	
	30	9.817 4510	242	9.940 0559	425	0.059 9441	9.877 3951	183	30	
	40	9.817 4752	242	9.940 0984	426	0.059 9016	9.877 3768	184	20	
	50	9.817 4994	241	9.940 1410	425	0.059 8590	9.877 3584	183	10	
4	0	9.817 5235	242	9.940 1835	425	0.059 8165	9.877 3401	184	0	56
	10	9.817 5477	242	9.940 2260	425	0.059 7740	9.877 3217	183	50	
	20	9.817 5719	241	9.940 2685	425	0.059 7315	9.877 3034	184	40	
	30	9.817 5960	242	9.940 3110	425	0.059 6890	9.877 2850	183	30	
	40	9.817 6202	241	9.940 3535	425	0.059 6465	9.877 2667	184	20	
	50	9.817 6443	242	9.940 3960	425	0.059 6040	9.877 2483	183	10	
5	0	9.817 6685	241	9.940 4385	425	0.059 5615	9.877 2300	184	0	55
	10	9.817 6926	242	9.940 4810	425	0.059 5190	9.877 2116	184	50	
	20	9.817 7168	241	9.940 5235	425	0.059 4765	9.877 1932	183	40	
	30	9.817 7409	242	9.940 5660	425	0.059 4340	9.877 1749	184	30	
	40	9.817 7651	241	9.940 6085	425	0.059 3915	9.877 1565	183	20	
	50	9.817 7892	241	9.940 6510	426	0.059 3490	9.877 1382	184	10	
6	0	9.817 8133	242	9.940 6936	425	0.059 3064	9.877 1198	184	0	54
	10	9.817 8375	241	9.940 7361	425	0.059 2639	9.877 1014	183	50	
	20	9.817 8616	241	9.940 7786	425	0.059 2214	9.877 0831	184	40	
	30	9.817 8857	242	9.940 8211	425	0.059 1789	9.877 0647	184	30	
	40	9.817 9099	241	9.940 8636	425	0.059 1364	9.877 0463	184	20	
	50	9.817 9340	241	9.940 9061	425	0.059 0939	9.877 0279	183	10	
7	0	9.817 9581	241	9.940 9486	425	0.059 0514	9.877 0096	184	0	53
	10	9.817 9822	242	9.940 9911	425	0.059 0089	9.876 9912	184	50	
	20	9.818 0064	241	9.941 0336	425	0.058 9664	9.876 9728	184	40	
	30	9.818 0305	241	9.941 0761	425	0.058 9239	9.876 9544	184	30	
	40	9.818 0546	241	9.941 1186	425	0.058 8814	9.876 9360	184	20	
	50	9.818 0787	241	9.941 1611	425	0.058 8389	9.876 9176	183	10	
8	0	9.818 1028	241	9.941 2036	425	0.058 7964	9.876 8993	184	0	52
	10	9.818 1269	241	9.941 2461	424	0.058 7539	9.876 8809	184	50	
	20	9.818 1510	241	9.941 2885	425	0.058 7115	9.876 8625	184	40	
	30	9.818 1751	241	9.941 3310	425	0.058 6690	9.876 8441	184	30	
	40	9.818 1992	241	9.941 3735	425	0.058 6265	9.876 8257	184	20	
	50	9.818 2233	241	9.941 4160	425	0.058 5840	9.876 8073	184	10	
9	0	9.818 2474	241	9.941 4585	425	0.058 5415	9.876 7889	184	0	51
	10	9.818 2715	241	9.941 5010	425	0.058 4990	9.876 7705	184	50	
	20	9.818 2956	241	9.941 5435	425	0.058 4565	9.876 7521	184	40	
	30	9.818 3197	241	9.941 5860	425	0.058 4140	9.876 7337	184	30	
	40	9.818 3438	241	9.941 6285	425	0.058 3715	9.876 7153	184	20	
	50	9.818 3679	240	9.941 6710	425	0.058 3290	9.876 6969	184	10	
10	0	9.818 3919		9.941 7135		0.058 2865	9.876 6785		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

48°

	426
1	42.6
2	85.2
3	127.8
4	170.4
5	213.0
6	255.6
7	298.2
8	340.8
9	383.4

	425
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

	242
1	24.2
2	48.4
3	72.6
4	96.8
5	121.0
6	145.2
7	169.4
8	193.6
9	217.8

	241
1	24.1
2	48.2
3	72.3
4	96.4
5	120.5
6	144.6
7	168.7
8	192.8
9	216.9

	183
1	18.3
2	36.6
3	54.9
4	73.2
5	91.5
6	109.8
7	128.1
8	146.4
9	164.7

	184
1	18.4
2	36.8
3	55.2
4	73.6
5	92.0
6	110.4
7	128.8
8	147.2
9	165.6

41°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.818 3919	241	9.941 7135	425	0.058 2865	9.876 6785	185	0	50
	10	9.818 4160	241	9.941 7560	425	0.058 2440	9.876 6600	184	50	
	20	9.818 4401	241	9.941 7985	424	0.058 2015	9.876 6416	184	40	
	30	9.818 4642	240	9.941 8409	425	0.058 1591	9.876 6232	184	30	
	40	9.818 4882	241	9.941 8834	425	0.058 1166	9.876 6048	184	20	
	50	9.818 5123	241	9.941 9259	425	0.058 0741	9.876 5864	184	10	
11	0	9.818 5364	240	9.941 9684	425	0.058 0316	9.876 5680	185	0	49
	10	9.818 5604	241	9.942 0109	425	0.057 9891	9.876 5495	184	50	
	20	9.818 5845	241	9.942 0534	425	0.057 9466	9.876 5311	184	40	
	30	9.818 6086	240	9.942 0959	425	0.057 9041	9.876 5127	184	30	
	40	9.818 6326	241	9.942 1384	424	0.057 8616	9.876 4943	185	20	
	50	9.818 6567	240	9.942 1808	425	0.057 8192	9.876 4758	184	10	
12	0	9.818 6807	241	9.942 2233	425	0.057 7767	9.876 4574	184	0	48
	10	9.818 7048	240	9.942 2658	425	0.057 7342	9.876 4390	185	50	
	20	9.818 7288	241	9.942 3083	425	0.057 6917	9.876 4205	184	40	
	30	9.818 7529	240	9.942 3508	425	0.057 6492	9.876 4021	185	30	
	40	9.818 7769	240	9.942 3933	424	0.057 6067	9.876 3836	184	20	
	50	9.818 8009	241	9.942 4357	425	0.057 5643	9.876 3652	184	10	
13	0	9.818 8250	240	9.942 4782	425	0.057 5218	9.876 3468	185	0	47
	10	9.818 8490	240	9.942 5207	425	0.057 4793	9.876 3283	184	50	
	20	9.818 8730	241	9.942 5632	425	0.057 4368	9.876 3099	185	40	
	30	9.818 8971	240	9.942 6057	424	0.057 3943	9.876 2914	184	30	
	40	9.818 9211	240	9.942 6481	425	0.057 3519	9.876 2730	185	20	
	50	9.818 9451	241	9.942 6906	425	0.057 3094	9.876 2545	184	10	
14	0	9.818 9692	240	9.942 7331	425	0.057 2669	9.876 2361	185	0	46
	10	9.818 9932	240	9.942 7756	424	0.057 2244	9.876 2176	184	50	
	20	9.819 0172	240	9.942 8180	425	0.057 1820	9.876 1992	185	40	
	30	9.819 0412	240	9.942 8605	425	0.057 1395	9.876 1807	185	30	
	40	9.819 0652	240	9.942 9030	425	0.057 0970	9.876 1622	184	20	
	50	9.819 0892	241	9.942 9455	424	0.057 0545	9.876 1438	185	10	
15	0	9.819 1133	240	9.942 9879	425	0.057 0121	9.876 1253	184	0	45
	10	9.819 1373	240	9.943 0304	425	0.056 9696	9.876 1069	185	50	
	20	9.819 1613	240	9.943 0729	425	0.056 9271	9.876 0884	185	40	
	30	9.819 1853	240	9.943 1154	424	0.056 8846	9.876 0699	185	30	
	40	9.819 2093	240	9.943 1578	425	0.056 8422	9.876 0514	184	20	
	50	9.819 2333	240	9.943 2003	425	0.056 7997	9.876 0330	185	10	
16	0	9.819 2573	240	9.943 2428	424	0.056 7572	9.876 0145	185	0	44
	10	9.819 2813	239	9.943 2852	425	0.056 7148	9.875 9960	185	50	
	20	9.819 3052	240	9.943 3277	425	0.056 6723	9.875 9775	184	40	
	30	9.819 3292	240	9.943 3702	424	0.056 6298	9.875 9591	185	30	
	40	9.819 3532	240	9.943 4126	425	0.056 5874	9.875 9406	185	20	
	50	9.819 3772	240	9.943 4551	425	0.056 5449	9.875 9221	185	10	
17	0	9.819 4012	240	9.943 4976	425	0.056 5024	9.875 9036	185	0	43
	10	9.819 4252	239	9.943 5401	424	0.056 4599	9.875 8851	185	50	
	20	9.819 4491	240	9.943 5825	425	0.056 4175	9.875 8666	185	40	
	30	9.819 4731	240	9.943 6250	424	0.056 3750	9.875 8481	185	30	
	40	9.819 4971	240	9.943 6674	425	0.056 3326	9.875 8296	184	20	
	50	9.819 5211	239	9.943 7099	425	0.056 2901	9.875 8112	185	10	
18	0	9.819 5450	240	9.943 7524	424	0.056 2476	9.875 7927	185	0	42
	10	9.819 5690	240	9.943 7948	425	0.056 2052	9.875 7742	185	50	
	20	9.819 5930	239	9.943 8373	425	0.056 1627	9.875 7557	185	40	
	30	9.819 6169	240	9.943 8798	424	0.056 1202	9.875 7372	185	30	
	40	9.819 6409	239	9.943 9222	425	0.056 0778	9.875 7187	186	20	
	50	9.819 6648	240	9.943 9647	425	0.056 0353	9.875 7001	185	10	
19	0	9.819 6888	239	9.944 0072	424	0.055 9928	9.875 6816	185	0	41
	10	9.819 7127	240	9.944 0496	425	0.055 9504	9.875 6631	185	50	
	20	9.819 7367	239	9.944 0921	424	0.055 9079	9.875 6446	185	40	
	30	9.819 7606	240	9.944 1345	425	0.055 8655	9.875 6261	185	30	
	40	9.819 7846	239	9.944 1770	424	0.055 8230	9.875 6076	185	20	
	50	9.819 8085	240	9.944 2194	425	0.055 7806	9.875 5891	185	10	
20	0	9.819 8325		9.944 2619		0.055 7381	9.875 5706		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

48°

	425
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

	424
1	42.4
2	84.8
3	127.2
4	169.6
5	212.0
6	254.4
7	296.8
8	339.2
9	381.6

	240
1	24.0
2	48.0
3	72.0
4	96.0
5	120.0
6	144.0
7	168.0
8	192.0
9	216.0

	239
1	23.9
2	47.8
3	71.7
4	95.6
5	119.5
6	143.4
7	167.3
8	191.2
9	215.1

	185
1	18.5
2	37.0
3	55.5
4	74.0
5	92.5
6	111.0
7	129.5
8	148.0
9	166.5

	186
1	18.6
2	37.2
3	55.8
4	74.4
5	93.0
6	111.6
7	130.2
8	148.8
9	167.4

41°

425	
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

240	
1	24.0
2	48.0
3	72.0
4	96.0
5	120.0
6	144.0
7	168.0
8	192.0
9	216.0

239	
1	23.9
2	47.8
3	71.7
4	95.6
5	119.5
6	143.4
7	167.3
8	191.2
9	215.1

238	
1	23.8
2	47.6
3	71.4
4	95.2
5	119.0
6	142.8
7	166.6
8	190.4
9	214.2

185	
1	18.5
2	37.0
3	55.5
4	74.0
5	92.5
6	111.0
7	129.5
8	148.0
9	166.5

186	
1	18.6
2	37.2
3	55.8
4	74.4
5	93.0
6	111.6
7	130.2
8	148.8
9	167.4

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.819 8325	239	9.944 2619	425	0.055 7381	9.875 5706	186	0	4
	10	9.819 8564	239	9.944 3044	424	0.055 6956	9.875 5520	185	50	
	20	9.819 8803	240	9.944 3468	425	0.055 6532	9.875 5335	185	40	
	30	9.819 9043	239	9.944 3893	424	0.055 6107	9.875 5150	185	30	
	40	9.819 9282	239	9.944 4317	425	0.055 5683	9.875 4965	186	20	
	50	9.819 9521	240	9.944 4742	424	0.055 5258	9.875 4779	185	10	
21	0	9.819 9761	239	9.944 5166	425	0.055 4834	9.875 4594	185	0	3
	10	9.820 0000	239	9.944 5591	425	0.055 4409	9.875 4409	186	50	
	20	9.820 0239	239	9.944 6016	424	0.055 3984	9.875 4223	185	40	
	30	9.820 0478	239	9.944 6440	425	0.055 3560	9.875 4038	185	30	
	40	9.820 0717	239	9.944 6865	424	0.055 3135	9.875 3853	186	20	
	50	9.820 0956	240	9.944 7289	425	0.055 2711	9.875 3667	185	10	
22	0	9.820 1196	239	9.944 7714	424	0.055 2286	9.875 3482	185	0	38
	10	9.820 1435	239	9.944 8138	425	0.055 1862	9.875 3297	186	50	
	20	9.820 1674	239	9.944 8563	424	0.055 1437	9.875 3111	185	40	
	30	9.820 1913	239	9.944 8987	425	0.055 1013	9.875 2926	186	30	
	40	9.820 2152	239	9.944 9412	424	0.055 0588	9.875 2740	185	20	
	50	9.820 2391	239	9.944 9836	425	0.055 0164	9.875 2555	186	10	
23	0	9.820 2630	239	9.945 0261	424	0.054 9739	9.875 2369	185	0	37
	10	9.820 2869	239	9.945 0685	425	0.054 9315	9.875 2184	186	50	
	20	9.820 3108	239	9.945 1110	424	0.054 8890	9.875 1998	185	40	
	30	9.820 3347	238	9.945 1534	424	0.054 8466	9.875 1813	186	30	
	40	9.820 3585	239	9.945 1958	425	0.054 8042	9.875 1627	186	20	
	50	9.820 3824	239	9.945 2383	424	0.054 7617	9.875 1441	185	10	
24	0	9.820 4063	239	9.945 2807	425	0.054 7193	9.875 1256	186	0	36
	10	9.820 4302	239	9.945 3232	424	0.054 6768	9.875 1070	186	50	
	20	9.820 4541	239	9.945 3656	425	0.054 6344	9.875 0884	185	40	
	30	9.820 4780	238	9.945 4081	424	0.054 5919	9.875 0699	186	30	
	40	9.820 5018	239	9.945 4505	425	0.054 5495	9.875 0513	186	20	
	50	9.820 5257	239	9.945 4930	424	0.054 5070	9.875 0327	185	10	
25	0	9.820 5496	238	9.945 5354	424	0.054 4646	9.875 0142	186	0	35
	10	9.820 5734	239	9.945 5778	425	0.054 4222	9.874 9956	186	50	
	20	9.820 5973	239	9.945 6203	424	0.054 3797	9.874 9770	186	40	
	30	9.820 6212	238	9.945 6627	425	0.054 3373	9.874 9584	185	30	
	40	9.820 6450	239	9.945 7052	424	0.054 2948	9.874 9399	186	20	
	50	9.820 6689	238	9.945 7476	424	0.054 2524	9.874 9213	186	10	
26	0	9.820 6927	239	9.945 7900	425	0.054 2100	9.874 9027	186	0	34
	10	9.820 7166	238	9.945 8325	424	0.054 1675	9.874 8841	186	50	
	20	9.820 7404	239	9.945 8749	425	0.054 1251	9.874 8655	186	40	
	30	9.820 7643	238	9.945 9174	424	0.054 0826	9.874 8469	186	30	
	40	9.820 7881	239	9.945 9598	424	0.054 0402	9.874 8283	186	20	
	50	9.820 8120	238	9.946 0022	425	0.053 9978	9.874 8097	185	10	
27	0	9.820 8358	239	9.946 0447	424	0.053 9553	9.874 7912	186	0	33
	10	9.820 8597	238	9.946 0871	424	0.053 9129	9.874 7726	186	50	
	20	9.820 8835	238	9.946 1295	425	0.053 8705	9.874 7540	186	40	
	30	9.820 9073	239	9.946 1720	424	0.053 8280	9.874 7354	186	30	
	40	9.820 9312	238	9.946 2144	424	0.053 7856	9.874 7168	186	20	
	50	9.820 9550	238	9.946 2568	425	0.053 7432	9.874 6982	187	10	
28	0	9.820 9788	238	9.946 2993	424	0.053 7007	9.874 6795	186	0	32
	10	9.821 0026	239	9.946 3417	424	0.053 6583	9.874 6609	186	50	
	20	9.821 0265	238	9.946 3841	425	0.053 6159	9.874 6423	186	40	
	30	9.821 0503	238	9.946 4266	424	0.053 5734	9.874 6237	186	30	
	40	9.821 0741	238	9.946 4690	424	0.053 5310	9.874 6051	186	20	
	50	9.821 0979	238	9.946 5114	425	0.053 4886	9.874 5865	186	10	
29	0	9.821 1217	238	9.946 5539	424	0.053 4461	9.874 5679	186	0	31
	10	9.821 1455	239	9.946 5963	424	0.053 4037	9.874 5493	187	50	
	20	9.821 1694	238	9.946 6387	424	0.053 3613	9.874 5306	186	40	
	30	9.821 1932	238	9.946 6811	425	0.053 3189	9.874 5120	186	30	
	40	9.821 2170	238	9.946 7236	424	0.053 2764	9.874 4934	186	20	
	50	9.821 2408	238	9.946 7660	424	0.053 2340	9.874 4748	187	10	
30	0	9.821 2646		9.946 8084		0.053 1916	9.874 4561		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

48°

41°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.821 2646	238	9.946 8084	425	0.053 1916	9.874 4561	186	0	30
	10	9.821 2884	238	9.946 8509	424	0.053 1491	9.874 4375	186	50	
	20	9.821 3122	238	9.946 8933	424	0.053 1067	9.874 4189	186	40	
	30	9.821 3360	237	9.946 9357	424	0.053 0643	9.874 4003	187	30	
	40	9.821 3597	238	9.946 9781	425	0.053 0219	9.874 3816	186	20	
	50	9.821 3835	238	9.947 0206	424	0.052 9794	9.874 3630	187	10	
31	0	9.821 4073	238	9.947 0630	424	0.052 9370	9.874 3443	186	0	29
	10	9.821 4311	238	9.947 1054	424	0.052 8946	9.874 3257	186	50	
	20	9.821 4549	238	9.947 1478	424	0.052 8522	9.874 3071	187	40	
	30	9.821 4787	237	9.947 1902	425	0.052 8098	9.874 2884	186	30	
	40	9.821 5024	238	9.947 2327	424	0.052 7673	9.874 2698	187	20	
	50	9.821 5262	238	9.947 2751	424	0.052 7249	9.874 2511	186	10	
32	0	9.821 5500	238	9.947 3175	424	0.052 6825	9.874 2325	187	0	28
	10	9.821 5738	237	9.947 3599	425	0.052 6401	9.874 2138	186	50	
	20	9.821 5975	238	9.947 4024	424	0.052 5976	9.874 1952	187	40	
	30	9.821 6213	238	9.947 4448	424	0.052 5552	9.874 1765	186	30	
	40	9.821 6451	237	9.947 4872	424	0.052 5128	9.874 1579	187	20	
	50	9.821 6688	238	9.947 5296	424	0.052 4704	9.874 1392	187	10	
33	0	9.821 6926	237	9.947 5720	424	0.052 4280	9.874 1205	186	0	27
	10	9.821 7163	238	9.947 6144	425	0.052 3856	9.874 1019	187	50	
	20	9.821 7401	237	9.947 6569	424	0.052 3431	9.874 0832	186	40	
	30	9.821 7638	238	9.947 6993	424	0.052 3007	9.874 0646	187	30	
	40	9.821 7876	237	9.947 7417	424	0.052 2583	9.874 0459	187	20	
	50	9.821 8113	238	9.947 7841	424	0.052 2159	9.874 0272	187	10	
34	0	9.821 8351	237	9.947 8265	424	0.052 1735	9.874 0085	186	0	26
	10	9.821 8588	237	9.947 8689	425	0.052 1311	9.873 9899	187	50	
	20	9.821 8825	238	9.947 9114	424	0.052 0886	9.873 9712	187	40	
	30	9.821 9063	237	9.947 9538	424	0.052 0462	9.873 9525	187	30	
	40	9.821 9300	238	9.947 9962	424	0.052 0038	9.873 9338	186	20	
	50	9.821 9538	237	9.948 0386	424	0.051 9614	9.873 9152	187	10	
35	0	9.821 9775	237	9.948 0810	424	0.051 9190	9.873 8965	187	0	25
	10	9.822 0012	237	9.948 1234	424	0.051 8766	9.873 8778	187	50	
	20	9.822 0249	238	9.948 1658	424	0.051 8342	9.873 8591	187	40	
	30	9.822 0487	237	9.948 2082	424	0.051 7918	9.873 8404	187	30	
	40	9.822 0724	237	9.948 2506	425	0.051 7494	9.873 8217	187	20	
	50	9.822 0961	237	9.948 2931	424	0.051 7069	9.873 8030	186	10	
36	0	9.822 1198	237	9.948 3355	424	0.051 6645	9.873 7844	187	0	24
	10	9.822 1435	237	9.948 3779	424	0.051 6221	9.873 7657	187	50	
	20	9.822 1672	238	9.948 4203	424	0.051 5797	9.873 7470	187	40	
	30	9.822 1910	237	9.948 4627	424	0.051 5373	9.873 7283	187	30	
	40	9.822 2147	237	9.948 5051	424	0.051 4949	9.873 7096	187	20	
	50	9.822 2384	237	9.948 5475	424	0.051 4525	9.873 6909	187	10	
37	0	9.822 2621	237	9.948 5899	424	0.051 4101	9.873 6722	187	0	23
	10	9.822 2858	237	9.948 6323	424	0.051 3677	9.873 6535	188	50	
	20	9.822 3095	237	9.948 6747	424	0.051 3253	9.873 6347	187	40	
	30	9.822 3332	237	9.948 7171	424	0.051 2829	9.873 6160	187	30	
	40	9.822 3569	236	9.948 7595	424	0.051 2405	9.873 5973	187	20	
	50	9.822 3805	237	9.948 8019	424	0.051 1981	9.873 5786	187	10	
38	0	9.822 4042	237	9.948 8443	424	0.051 1557	9.873 5599	187	0	22
	10	9.822 4279	237	9.948 8867	424	0.051 1133	9.873 5412	187	50	
	20	9.822 4516	237	9.948 9291	424	0.051 0709	9.873 5225	188	40	
	30	9.822 4753	237	9.948 9715	424	0.051 0285	9.873 5037	187	30	
	40	9.822 4990	236	9.949 0139	424	0.050 9861	9.873 4850	187	20	
	50	9.822 5226	237	9.949 0563	424	0.050 9437	9.873 4663	187	10	
39	0	9.822 5463	237	9.949 0987	424	0.050 9013	9.873 4476	188	0	21
	10	9.822 5700	237	9.949 1411	424	0.050 8589	9.873 4288	187	50	
	20	9.822 5937	236	9.949 1835	424	0.050 8165	9.873 4101	187	40	
	30	9.822 6173	237	9.949 2259	424	0.050 7741	9.873 3914	188	30	
	40	9.822 6410	236	9.949 2683	424	0.050 7317	9.873 3726	187	20	
	50	9.822 6646	237	9.949 3107	424	0.050 6893	9.873 3539	187	10	
40	0	9.822 6883		9.949 3531		0.050 6469	9.873 3352		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

48°

	425
1	42.5
2	85.0
3	127.5
4	170.0
5	212.5
6	255.0
7	297.5
8	340.0
9	382.5

	424
1	42.4
2	84.8
3	127.2
4	169.6
5	212.0
6	254.4
7	296.8
8	339.2
9	381.6

	237
1	23.7
2	47.4
3	71.1
4	94.8
5	118.5
6	142.2
7	165.9
8	189.6
9	213.3

	236
1	23.6
2	47.2
3	70.8
4	94.4
5	118.0
6	141.6
7	165.2
8	188.8
9	212.4

	187
1	18.7
2	37.4
3	56.1
4	74.8
5	93.5
6	112.2
7	130.9
8	149.6
9	168.3

	188
1	18.8
2	37.6
3	56.4
4	75.2
5	94.0
6	112.8
7	131.6
8	150.4
9	169.2

41°

	424
1	42.4
2	84.8
3	127.2
4	169.6
5	212.0
6	254.4
7	296.8
8	339.2
9	381.6

	423
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

	237
1	23.7
2	47.4
3	71.1
4	94.8
5	118.5
6	142.2
7	165.9
8	189.6
9	213.3

	236
1	23.6
2	47.2
3	70.8
4	94.4
5	118.0
6	141.6
7	165.2
8	188.8
9	212.4

	187
1	18.7
2	37.4
3	56.1
4	74.8
5	93.5
6	112.2
7	130.9
8	149.6
9	168.3

	188
1	18.8
2	37.6
3	56.4
4	75.2
5	94.0
6	112.8
7	131.6
8	150.4
9	169.2

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.822 6883	237	9.949 3531	424	0.050 6469	9.873 3352	188	0	20
	10	9.822 7120	236	9.949 3955	424	0.050 6045	9.873 3164	187	50	
	20	9.822 7356	237	9.949 4379	424	0.050 5621	9.873 2977	187	40	
	30	9.822 7593	236	9.949 4803	424	0.050 5197	9.873 2790	188	30	
	40	9.822 7829	237	9.949 5227	424	0.050 4773	9.873 2602	187	20	
	50	9.822 8066	236	9.949 5651	424	0.050 4349	9.873 2415	188	10	
41	0	9.822 8302	237	9.949 6075	424	0.050 3925	9.873 2227	187	0	19
	10	9.822 8539	236	9.949 6499	424	0.050 3501	9.873 2040	188	50	
	20	9.822 8775	237	9.949 6923	424	0.050 3077	9.873 1852	187	40	
	30	9.822 9012	236	9.949 7347	424	0.050 2653	9.873 1665	188	30	
	40	9.822 9248	236	9.949 7771	424	0.050 2229	9.873 1477	187	20	
	50	9.822 9484	237	9.949 8195	424	0.050 1805	9.873 1290	188	10	
42	0	9.822 9721	236	9.949 8619	424	0.050 1381	9.873 1102	188	0	18
	10	9.822 9957	236	9.949 9043	423	0.050 0957	9.873 0914	187	50	
	20	9.823 0193	236	9.949 9466	424	0.050 0534	9.873 0727	188	40	
	30	9.823 0429	237	9.949 9890	424	0.050 0110	9.873 0539	188	30	
	40	9.823 0666	236	9.950 0314	424	0.049 9686	9.873 0351	187	20	
	50	9.823 0902	236	9.950 0738	424	0.049 9262	9.873 0164	188	10	
43	0	9.823 1138	236	9.950 1162	424	0.049 8838	9.872 9976	188	0	17
	10	9.823 1374	236	9.950 1586	424	0.049 8414	9.872 9788	187	50	
	20	9.823 1610	237	9.950 2010	424	0.049 7990	9.872 9601	188	40	
	30	9.823 1847	236	9.950 2434	424	0.049 7566	9.872 9413	188	30	
	40	9.823 2083	236	9.950 2858	423	0.049 7142	9.872 9225	188	20	
	50	9.823 2319	236	9.950 3281	424	0.049 6719	9.872 9037	188	10	
44	0	9.823 2555	236	9.950 3705	424	0.049 6295	9.872 8849	187	0	16
	10	9.823 2791	236	9.950 4129	424	0.049 5871	9.872 8662	188	50	
	20	9.823 3027	236	9.950 4553	424	0.049 5447	9.872 8474	188	40	
	30	9.823 3263	236	9.950 4977	424	0.049 5023	9.872 8286	188	30	
	40	9.823 3499	236	9.950 5401	423	0.049 4599	9.872 8098	188	20	
	50	9.823 3735	236	9.950 5824	424	0.049 4176	9.872 7910	188	10	
45	0	9.823 3971	235	9.950 6248	424	0.049 3752	9.872 7722	188	0	15
	10	9.823 4206	236	9.950 6672	424	0.049 3328	9.872 7534	188	50	
	20	9.823 4442	236	9.950 7096	424	0.049 2904	9.872 7346	188	40	
	30	9.823 4678	236	9.950 7520	424	0.049 2480	9.872 7158	188	30	
	40	9.823 4914	236	9.950 7944	423	0.049 2056	9.872 6970	188	20	
	50	9.823 5150	236	9.950 8367	424	0.049 1633	9.872 6782	188	10	
46	0	9.823 5386	235	9.950 8791	424	0.049 1209	9.872 6594	188	0	14
	10	9.823 5621	236	9.950 9215	424	0.049 0785	9.872 6406	188	50	
	20	9.823 5857	236	9.950 9639	424	0.049 0361	9.872 6218	188	40	
	30	9.823 6093	235	9.951 0063	423	0.048 9937	9.872 6030	188	30	
	40	9.823 6328	236	9.951 0486	424	0.048 9514	9.872 5842	188	20	
	50	9.823 6564	236	9.951 0910	424	0.048 9090	9.872 5654	188	10	
47	0	9.823 6800	235	9.951 1334	424	0.048 8666	9.872 5466	188	0	13
	10	9.823 7035	236	9.951 1758	423	0.048 8242	9.872 5278	188	50	
	20	9.823 7271	236	9.951 2181	424	0.048 7819	9.872 5090	189	40	
	30	9.823 7507	235	9.951 2605	424	0.048 7395	9.872 4901	188	30	
	40	9.823 7742	236	9.951 3029	424	0.048 6971	9.872 4713	188	20	
	50	9.823 7978	235	9.951 3453	423	0.048 6547	9.872 4525	188	10	
48	0	9.823 8213	236	9.951 3876	424	0.048 6124	9.872 4337	189	0	12
	10	9.823 8449	235	9.951 4300	424	0.048 5700	9.872 4148	188	50	
	20	9.823 8684	235	9.951 4724	424	0.048 5276	9.872 3960	188	40	
	30	9.823 8919	236	9.951 5148	423	0.048 4852	9.872 3772	189	30	
	40	9.823 9155	235	9.951 5571	424	0.048 4429	9.872 3583	188	20	
	50	9.823 9390	236	9.951 5995	424	0.048 4005	9.872 3395	188	10	
49	0	9.823 9626	235	9.951 6419	424	0.048 3581	9.872 3207	189	0	11
	10	9.823 9861	235	9.951 6843	423	0.048 3157	9.872 3018	188	50	
	20	9.824 0096	236	9.951 7266	424	0.048 2734	9.872 2830	188	40	
	30	9.824 0332	235	9.951 7690	424	0.048 2310	9.872 2642	189	30	
	40	9.824 0567	235	9.951 8114	423	0.048 1886	9.872 2453	188	20	
	50	9.824 0802	235	9.951 8537	424	0.048 1463	9.872 2265	189	10	
50	0	9.824 1037		9.951 8961		0.048 1039	9.872 2076		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

48°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.824 1037	236	9.951 8961	424	0.048 1039	9.872 2076	188	0	10
	10	9.824 1273	235	9.951 9385	423	0.048 0615	9.872 1888	189	50	
	20	9.824 1508	235	9.951 9808	424	0.048 0192	9.872 1699	188	40	
	30	9.824 1743	235	9.952 0232	424	0.047 9768	9.872 1511	189	30	
	40	9.824 1978	235	9.952 0656	423	0.047 9344	9.872 1322	188	20	
	50	9.824 2213	235	9.952 1079	424	0.047 8921	9.872 1134	189	10	
51	0	9.824 2448	235	9.952 1503	424	0.047 8497	9.872 0945	189	0	9
	10	9.824 2683	235	9.952 1927	423	0.047 8073	9.872 0756	188	50	
	20	9.824 2918	235	9.952 2350	424	0.047 7650	9.872 0568	189	40	
	30	9.824 3153	235	9.952 2774	424	0.047 7226	9.872 0379	188	30	
	40	9.824 3388	235	9.952 3198	423	0.047 6802	9.872 0191	189	20	
	50	9.824 3623	235	9.952 3621	424	0.047 6379	9.872 0002	189	10	
52	0	9.824 3858	235	9.952 4045	424	0.047 5955	9.871 9813	188	0	8
	10	9.824 4093	235	9.952 4469	423	0.047 5531	9.871 9625	189	50	
	20	9.824 4328	235	9.952 4892	424	0.047 5108	9.871 9436	189	40	
	30	9.824 4563	235	9.952 5316	424	0.047 4684	9.871 9247	189	30	
	40	9.824 4798	235	9.952 5740	423	0.047 4260	9.871 9058	188	20	
	50	9.824 5033	234	9.952 6163	424	0.047 3837	9.871 8870	189	10	
53	0	9.824 5267	235	9.952 6587	423	0.047 3413	9.871 8681	189	0	7
	10	9.824 5502	235	9.952 7010	424	0.047 2990	9.871 8492	189	50	
	20	9.824 5737	235	9.952 7434	424	0.047 2566	9.871 8303	189	40	
	30	9.824 5972	234	9.952 7858	423	0.047 2142	9.871 8114	189	30	
	40	9.824 6206	235	9.952 8281	424	0.047 1719	9.871 7925	189	20	
	50	9.824 6441	235	9.952 8705	423	0.047 1295	9.871 7736	188	10	
54	0	9.824 6676	235	9.952 9128	424	0.047 0872	9.871 7548	189	0	6
	10	9.824 6911	234	9.952 9552	423	0.047 0448	9.871 7359	189	50	
	20	9.824 7145	235	9.952 9975	424	0.047 0025	9.871 7170	189	40	
	30	9.824 7380	234	9.953 0399	424	0.046 9601	9.871 6981	189	30	
	40	9.824 7614	235	9.953 0823	423	0.046 9177	9.871 6792	189	20	
	50	9.824 7849	234	9.953 1246	424	0.046 8754	9.871 6603	189	10	
55	0	9.824 8083	235	9.953 1670	423	0.046 8330	9.871 6414	189	0	5
	10	9.824 8318	234	9.953 2093	424	0.046 7907	9.871 6225	189	50	
	20	9.824 8552	235	9.953 2517	423	0.046 7483	9.871 6036	189	40	
	30	9.824 8787	234	9.953 2940	424	0.046 7060	9.871 5847	190	30	
	40	9.824 9021	235	9.953 3364	423	0.046 6636	9.871 5657	189	20	
	50	9.824 9256	234	9.953 3787	424	0.046 6213	9.871 5468	189	10	
56	0	9.824 9490	235	9.953 4211	423	0.046 5789	9.871 5279	189	0	4
	10	9.824 9725	234	9.953 4634	424	0.046 5366	9.871 5090	189	50	
	20	9.824 9959	234	9.953 5058	424	0.046 4942	9.871 4901	189	40	
	30	9.825 0193	235	9.953 5482	423	0.046 4518	9.871 4712	189	30	
	40	9.825 0428	234	9.953 5905	424	0.046 4095	9.871 4523	190	20	
	50	9.825 0662	234	9.953 6329	423	0.046 3671	9.871 4333	189	10	
57	0	9.825 0896	234	9.953 6752	424	0.046 3248	9.871 4144	189	0	3
	10	9.825 1130	235	9.953 7176	423	0.046 2824	9.871 3955	189	50	
	20	9.825 1365	234	9.953 7599	424	0.046 2401	9.871 3766	190	40	
	30	9.825 1599	234	9.953 8023	423	0.046 1977	9.871 3576	189	30	
	40	9.825 1833	234	9.953 8446	424	0.046 1554	9.871 3387	189	20	
	50	9.825 2067	234	9.953 8870	423	0.046 1130	9.871 3198	190	10	
58	0	9.825 2301	234	9.953 9293	423	0.046 0707	9.871 3008	189	0	2
	10	9.825 2535	234	9.953 9716	424	0.046 0284	9.871 2819	190	50	
	20	9.825 2769	234	9.954 0140	423	0.045 9860	9.871 2629	189	40	
	30	9.825 3003	234	9.954 0563	424	0.045 9437	9.871 2440	189	30	
	40	9.825 3237	235	9.954 0987	423	0.045 9013	9.871 2251	190	20	
	50	9.825 3472	233	9.954 1410	424	0.045 8590	9.871 2061	189	10	
59	0	9.825 3705	234	9.954 1834	423	0.045 8166	9.871 1872	190	0	1
	10	9.825 3939	234	9.954 2257	424	0.045 7743	9.871 1682	189	50	
	20	9.825 4173	234	9.954 2681	423	0.045 7319	9.871 1493	190	40	
	30	9.825 4407	234	9.954 3104	424	0.045 6896	9.871 1303	189	30	
	40	9.825 4641	234	9.954 3528	423	0.045 6472	9.871 1114	190	20	
	50	9.825 4875	234	9.954 3951	423	0.045 6049	9.871 0924	189	10	
60	0	9.825 5109		9.954 4374		0.045 5626	9.871 0735		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

48°

	424
1	42.4
2	84.8
3	127.2
4	169.6
5	212.0
6	254.4
7	296.8
8	339.2
9	381.6

	423
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

	235
1	23.5
2	47.0
3	70.5
4	94.0
5	117.5
6	141.0
7	164.5
8	188.0
9	211.5

	234
1	23.4
2	46.8
3	70.2
4	93.6
5	117.0
6	140.4
7	163.8
8	187.2
9	210.6

	189
1	18.9
2	37.8
3	56.7
4	75.6
5	94.5
6	113.4
7	132.3
8	151.2
9	170.1

	190
1	19.0
2	38.0
3	57.0
4	76.0
5	95.0
6	114.0
7	133.0
8	152.0
9	171.0

42°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.825 5109	234	9.954 4374	424	0.045 5626	9.871 0735	190	0	60
	10	9.825 5343	234	9.954 4798	423	0.045 5202	9.871 0545	190	50	
	20	9.825 5577	233	9.954 5221	424	0.045 4779	9.871 0355	189	40	
	30	9.825 5810	234	9.954 5645	423	0.045 4355	9.871 0166	190	30	
	40	9.825 6044	234	9.954 6068	423	0.045 3932	9.870 9976	190	20	
	50	9.825 6278	234	9.954 6491	424	0.045 3509	9.870 9786	189	10	
1	0	9.825 6512	233	9.954 6915	423	0.045 3085	9.870 9597	190	0	59
	10	9.825 6745	234	9.954 7338	424	0.045 2662	9.870 9407	190	50	
	20	9.825 6979	234	9.954 7762	423	0.045 2238	9.870 9217	189	40	
	30	9.825 7213	233	9.954 8185	423	0.045 1815	9.870 9028	190	30	
	40	9.825 7446	234	9.954 8608	424	0.045 1392	9.870 8838	190	20	
	50	9.825 7680	233	9.954 9032	423	0.045 0968	9.870 8648	190	10	
2	0	9.825 7913	234	9.954 9455	424	0.045 0545	9.870 8458	190	0	58
	10	9.825 8147	234	9.954 9879	423	0.045 0121	9.870 8268	189	50	
	20	9.825 8381	233	9.955 0302	423	0.044 9698	9.870 8079	190	40	
	30	9.825 8614	234	9.955 0725	424	0.044 9275	9.870 7889	190	30	
	40	9.825 8848	233	9.955 1149	423	0.044 8851	9.870 7699	190	20	
	50	9.825 9081	233	9.955 1572	423	0.044 8428	9.870 7509	190	10	
3	0	9.825 9314	234	9.955 1995	424	0.044 8005	9.870 7319	190	0	57
	10	9.825 9548	233	9.955 2419	423	0.044 7581	9.870 7129	190	50	
	20	9.825 9781	234	9.955 2842	423	0.044 7158	9.870 6939	190	40	
	30	9.826 0015	233	9.955 3265	424	0.044 6735	9.870 6749	190	30	
	40	9.826 0248	233	9.955 3689	423	0.044 6311	9.870 6559	190	20	
	50	9.826 0481	234	9.955 4112	423	0.044 5888	9.870 6369	190	10	
4	0	9.826 0715	233	9.955 4535	424	0.044 5465	9.870 6179	190	0	56
	10	9.826 0948	233	9.955 4959	423	0.044 5041	9.870 5989	190	50	
	20	9.826 1181	233	9.955 5382	423	0.044 4618	9.870 5799	190	40	
	30	9.826 1414	234	9.955 5805	424	0 044 4195	9.870 5609	190	30	
	40	9.826 1648	233	9.955 6229	423	0.044 3771	9.870 5419	190	20	
	50	9.826 1881	233	9.955 6652	423	0.044 3348	9.870 5229	190	10	
5	0	9.826 2114	233	9.955 7075	423	0.044 2925	9.870 5039	190	0	55
	10	9.826 2347	233	9.955 7498	424	0.044 2502	9.870 4849	191	50	
	20	9.826 2580	233	9.955 7922	423	0.044 2078	9.870 4658	190	40	
	30	9.826 2813	233	9.955 8345	423	0.044 1655	9.870 4468	190	30	
	40	9.826 3046	233	9.955 8768	424	0.044 1232	9.870 4278	190	20	
	50	9.826 3279	233	9.955 9192	423	0.044 0808	9.870 4088	190	10	
6	0	9.826 3512	234	9.955 9615	423	0.044 0385	9.870 3898	191	0	54
	10	9.826 3746	232	9.956 0038	423	0.043 9962	9.870 3707	190	50	
	20	9.826 3978	233	9.956 0461	424	0.043 9539	9.870 3517	190	40	
	30	9.826 4211	233	9.956 0885	423	0.043 9115	9.870 3327	190	30	
	40	9.826 4444	233	9.956 1308	423	0.043 8692	9.870 3137	191	20	
	50	9.826 4677	233	9.956 1731	423	0.043 8269	9.870 2946	190	10	
7	0	9.826 4910	233	9.956 2154	424	0.043 7846	9.870 2756	191	0	53
	10	9.826 5143	233	9.956 2578	423	0.043 7422	9.870 2565	190	50	
	20	9.826 5376	233	9.956 3001	423	0.043 6999	9.870 2375	190	40	
	30	9.826 5609	233	9.956 3424	423	0.043 6576	9.870 2185	191	30	
	40	9.826 5842	232	9.956 3847	424	0.043 6153	9.870 1994	190	20	
	50	9.826 6074	233	9.956 4271	423	0.043 5729	9.870 1804	191	10	
8	0	9.826 6307	233	9.956 4694	423	0.043 5306	9.870 1613	190	0	52
	10	9.826 6540	233	9.956 5117	423	0.043 4883	9.870 1423	191	50	
	20	9.826 6773	232	9.956 5540	423	0.043 4460	9.870 1232	190	40	
	30	9.826 7005	233	9.956 5963	424	0.043 4037	9.870 1042	191	30	
	40	9.826 7238	233	9.956 6387	423	0.043 3613	9.870 0851	190	20	
	50	9.826 7471	232	9.956 6810	423	0.043 3190	9.870 0661	191	10	
9	0	9.826 7703	233	9.956 7233	423	0.043 2767	9.870 0470	190	0	51
	10	9.826 7936	232	9.956 7656	423	0.043 2344	9.870 0280	191	50	
	20	9.826 8168	233	9.956 8079	424	0.043 1921	9.870 0089	191	40	
	30	9.826 8401	232	9.956 8503	423	0.043 1497	9.869 9898	190	30	
	40	9.826 8633	233	9.956 8926	423	0.043 1074	9.869 9708	191	20	
	50	9.826 8866	232	9.956 9349	423	0.043 0651	9.869 9517	191	10	
10	0	9.826 9098		9.956 9772		0.043 0228	9.869 9326		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

47°

	424
1	42.4
2	84.8
3	127.2
4	169.6
5	212.0
6	254.4
7	296.8
8	339.2
9	381.6

	423
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

	234
1	23.4
2	46.8
3	70.2
4	93.6
5	117.0
6	140.4
7	163.8
8	187.2
9	210.6

	233
1	23.3
2	46.6
3	69.9
4	93.2
5	116.5
6	139.8
7	163.1
8	186.4
9	209.7

	189
1	18.9
2	37.8
3	56.7
4	75.6
5	94.5
6	113.4
7	132.3
8	151.2
9	170.1

	190
1	19.0
2	38.0
3	57.0
4	76.0
5	95.0
6	114.0
7	133.0
8	152.0
9	171.0

42°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.826 9098	233	9.956 9772	423	0.043 0228	9.869 9326	190	0	50
	10	9.826 9331	232	9.957 0195	423	0.042 9805	9.869 9136	191	50	
	20	9.826 9563	233	9.957 0618	424	0.042 9382	9.869 8945	191	40	
	30	9.826 9796	232	9.957 1042	423	0.042 8958	9.869 8754	191	30	
	40	9.827 0028	233	9.957 1465	423	0.042 8535	9.869 8563	190	20	
	50	9.827 0261	232	9.957 1888	423	0.042 8112	9.869 8373	191	10	
11	0	9.827 0493	232	9.957 2311	423	0.042 7689	9.869 8182	191	0	49
	10	9.827 0725	233	9.957 2734	423	0.042 7266	9.869 7991	191	50	
	20	9.827 0958	232	9.957 3157	424	0.042 6843	9.869 7800	191	40	
	30	9.827 1190	232	9.957 3581	423	0.042 6419	9.869 7609	191	30	
	40	9.827 1422	232	9.957 4004	423	0.042 5996	9.869 7418	190	20	
	50	9.827 1654	233	9.957 4427	423	0.042 5573	9.869 7228	191	10	
12	0	9.827 1887	232	9.957 4850	423	0.042 5150	9.869 7037	191	0	48
	10	9.827 2119	232	9.957 5273	423	0.042 4727	9.869 6846	191	50	
	20	9.827 2351	232	9.957 5696	423	0.042 4304	9.869 6655	191	40	
	30	9.827 2583	232	9.957 6119	423	0.042 3881	9.869 6464	191	30	
	40	9.827 2815	232	9.957 6542	423	0.042 3458	9.869 6273	191	20	
	50	9.827 3047	232	9.957 6965	424	0.042 3035	9.869 6082	191	10	
13	0	9.827 3279	232	9.957 7389	423	0.042 2611	9.869 5891	191	0	47
	10	9.827 3511	233	9.957 7812	423	0.042 2188	9.869 5700	191	50	
	20	9.827 3744	232	9.957 8235	423	0.042 1765	9.869 5509	191	40	
	30	9.827 3976	232	9.957 8658	423	0.042 1342	9.869 5318	191	30	
	40	9.827 4208	232	9.957 9081	423	0.042 0919	9.869 5127	192	20	
	50	9.827 4440	231	9.957 9504	423	0.042 0496	9.869 4935	191	10	
14	0	9.827 4671	232	9.957 9927	423	0.042 0073	9.869 4744	191	0	46
	10	9.827 4903	232	9.958 0350	423	0.041 9650	9.869 4553	191	50	
	20	9.827 5135	232	9.958 0773	423	0.041 9227	9.869 4362	191	40	
	30	9.827 5367	232	9.958 1196	423	0.041 8804	9.869 4171	191	30	
	40	9.827 5599	232	9.958 1619	423	0.041 8381	9.869 3980	192	20	
	50	9.827 5831	232	9.958 2042	423	0.041 7958	9.869 3788	191	10	
15	0	9.827 6063	231	9.958 2465	424	0.041 7535	9.869 3597	191	0	45
	10	9.827 6294	232	9.958 2889	423	0.041 7111	9.869 3406	191	50	
	20	9.827 6526	232	9.958 3312	423	0.041 6688	9.869 3215	192	40	
	30	9.827 6758	232	9.958 3735	423	0.041 6265	9.869 3023	191	30	
	40	9.827 6990	231	9.958 4158	423	0.041 5842	9.869 2832	191	20	
	50	9.827 7221	232	9.958 4581	423	0.041 5419	9.869 2641	192	10	
16	0	9.827 7453	232	9.958 5004	423	0.041 4996	9.869 2449	191	0	44
	10	9.827 7685	231	9.958 5427	423	0.041 4573	9.869 2258	191	50	
	20	9.827 7916	232	9.958 5850	423	0.041 4150	9.869 2067	192	40	
	30	9.827 8148	232	9.958 6273	423	0.041 3727	9.869 1875	191	30	
	40	9.827 8380	231	9.958 6696	423	0.041 3304	9.869 1684	192	20	
	50	9.827 8611	232	9.958 7119	423	0.041 2881	9.869 1492	191	10	
17	0	9.827 8843	231	9.958 7542	423	0.041 2458	9.869 1301	192	0	43
	10	9.827 9074	232	9.958 7965	423	0.041 2035	9.869 1109	191	50	
	20	9.827 9306	231	9.958 8388	423	0.041 1612	9.869 0918	192	40	
	30	9.827 9537	232	9.958 8811	423	0.041 1189	9.869 0726	191	30	
	40	9.827 9769	231	9.958 9234	423	0.041 0766	9.869 0535	192	20	
	50	9.828 0000	231	9.958 9657	423	0.041 0343	9.869 0343	191	10	
18	0	9.828 0231	232	9.959 0080	423	0.040 9920	9.869 0152	192	0	42
	10	9.828 0463	231	9.959 0503	423	0.040 9497	9.868 9960	192	50	
	20	9.828 0694	231	9.959 0926	423	0.040 9074	9.868 9768	191	40	
	30	9.828 0925	232	9.959 1349	423	0.040 8651	9.868 9577	192	30	
	40	9.828 1157	231	9.959 1772	423	0.040 8228	9.868 9385	192	20	
	50	9.828 1388	231	9.959 2195	423	0.040 7805	9.868 9193	191	10	
19	0	9.828 1619	232	9.959 2618	423	0.040 7382	9.868 9002	192	0	41
	10	9.828 1851	231	9.959 3041	423	0.040 6959	9.868 8810	192	50	
	20	9.828 2082	231	9.959 3464	422	0.040 6536	9.868 8618	191	40	
	30	9.828 2313	231	9.959 3886	423	0.040 6114	9.868 8427	192	30	
	40	9.828 2544	231	9.959 4309	423	0.040 5691	9.868 8235	192	20	
	50	9.828 2775	231	9.959 4732	423	0.040 5268	9.868 8043	192	10	
20	0	9.828 3006		9.959 5155		0.040 4845	9.868 7851		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

47°

	423
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	232
1	23.2
2	46.4
3	69.6
4	92.8
5	116.0
6	139.2
7	162.4
8	185.6
9	208.8

	231
1	23.1
2	46.2
3	69.3
4	92.4
5	115.5
6	138.6
7	161.7
8	184.8
9	207.9

	191
1	19.1
2	38.2
3	57.3
4	76.4
5	95.5
6	114.6
7	133.7
8	152.8
9	171.9

	192
1	19.2
2	38.4
3	57.6
4	76.8
5	96.0
6	115.2
7	134.4
8	153.6
9	172.8

42°

423	
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

232	
1	23.2
2	46.4
3	69.6
4	92.8
5	116.0
6	139.2
7	162.4
8	185.6
9	208.8

231	
1	23.1
2	46.2
3	69.3
4	92.4
5	115.5
6	138.6
7	161.7
8	184.8
9	207.9

230	
1	23.0
2	46.0
3	69.0
4	92.0
5	115.0
6	138.0
7	161.0
8	184.0
9	207.0

191	
1	19.1
2	38.2
3	57.3
4	76.4
5	95.5
6	114.6
7	133.7
8	152.8
9	171.9

192	
1	19.2
2	38.4
3	57.6
4	76.8
5	96.0
6	115.2
7	134.4
8	153.6
9	172.8

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.828 3006	232	9.959 5155	423	0.040 4845	9.868 7851	192	0	40
	10	9.828 3238	231	9.959 5578	423	0.040 4422	9.868 7659	191	50	
	20	9.828 3469	231	9.959 6001	423	0.040 3999	9.868 7468	192	40	
	30	9.828 3700	231	9.959 6424	423	0.040 3576	9.868 7276	192	30	
	40	9.828 3931	231	9.959 6847	423	0.040 3153	9.868 7084	192	20	
	50	9.828 4162	231	9.959 7270	423	0.040 2730	9.868 6892	192	10	
21	0	9.828 4393	231	9.959 7693	423	0.040 2307	9.868 6700	192	0	39
	10	9.828 4624	231	9.959 8116	423	0.040 1884	9.868 6508	192	50	
	20	9.828 4855	231	9.959 8539	423	0.040 1461	9.868 6316	192	40	
	30	9.828 5086	231	9.959 8962	422	0.040 1038	9.868 6124	192	30	
	40	9.828 5317	230	9.959 9384	423	0.040 0616	9.868 5932	192	20	
	50	9.828 5547	231	9.959 9807	423	0.040 0193	9.868 5740	192	10	
22	0	9.828 5778	231	9.960 0230	423	0.039 9770	9.868 5548	192	0	38
	10	9.828 6009	231	9.960 0653	423	0.039 9347	9.868 5356	192	50	
	20	9.828 6240	231	9.960 1076	423	0.039 8924	9.868 5164	192	40	
	30	9.828 6471	231	9.960 1499	423	0.039 8501	9.868 4972	192	30	
	40	9.828 6702	230	9.960 1922	423	0.039 8078	9.868 4780	192	20	
	50	9.828 6932	231	9.960 2345	422	0.039 7655	9.868 4588	192	10	
23	0	9.828 7163	231	9.960 2767	423	0.039 7233	9.868 4396	193	0	37
	10	9.828 7394	230	9.960 3190	423	0.039 6810	9.868 4203	192	50	
	20	9.828 7624	231	9.960 3613	423	0.039 6387	9.868 4011	192	40	
	30	9.828 7855	231	9.960 4036	423	0.039 5964	9.868 3819	192	30	
	40	9.828 8086	230	9.960 4459	423	0.039 5541	9.868 3627	192	20	
	50	9.828 8316	231	9.960 4882	423	0.039 5118	9.868 3435	193	10	
24	0	9.828 8547	231	9.960 5305	422	0.039 4695	9.868 3242	192	0	36
	10	9.828 8778	230	9.960 5727	423	0.039 4273	9.868 3050	192	50	
	20	9.828 9008	231	9.960 6150	423	0.039 3850	9.868 2858	193	40	
	30	9.828 9239	230	9.960 6573	423	0.039 3427	9.868 2665	192	30	
	40	9.828 9469	231	9.960 6996	423	0.039 3004	9.868 2473	192	20	
	50	9.828 9700	230	9.960 7419	423	0.039 2581	9.868 2281	193	10	
25	0	9.828 9930	231	9.960 7842	422	0.039 2158	9.868 2088	192	0	35
	10	9.829 0161	230	9.960 8264	423	0.039 1736	9.868 1896	192	50	
	20	9.829 0391	230	9.960 8687	423	0.039 1313	9.868 1704	193	40	
	30	9.829 0621	231	9.960 9110	423	0.039 0890	9.868 1511	192	30	
	40	9.829 0852	230	9.960 9533	423	0.039 0467	9.868 1319	193	20	
	50	9.829 1082	230	9.960 9956	422	0.039 0044	9.868 1126	192	10	
26	0	9.829 1312	231	9.961 0378	423	0.038 9622	9.868 0934	193	0	34
	10	9.829 1543	230	9.961 0801	423	0.038 9199	9.868 0741	192	50	
	20	9.829 1773	230	9.961 1224	423	0.038 8776	9.868 0549	193	40	
	30	9.829 2003	230	9.961 1647	423	0.038 8353	9.868 0356	192	30	
	40	9.829 2233	231	9.961 2070	422	0.038 7930	9.868 0164	193	20	
	50	9.829 2464	230	9.961 2492	423	0.038 7508	9.867 9971	192	10	
27	0	9.829 2694	230	9.961 2915	423	0.038 7085	9.867 9779	193	0	33
	10	9.829 2924	230	9.961 3338	423	0.038 6662	9.867 9586	193	50	
	20	9.829 3154	230	9.961 3761	423	0.038 6239	9.867 9393	192	40	
	30	9.829 3384	230	9.961 4184	422	0.038 5816	9.867 9201	193	30	
	40	9.829 3614	230	9.961 4606	423	0.038 5394	9.867 9008	193	20	
	50	9.829 3844	231	9.961 5029	423	0.038 4971	9.867 8815	192	10	
28	0	9.829 4075	230	9.961 5452	423	0.038 4548	9.867 8623	193	0	32
	10	9.829 4305	230	9.961 5875	422	0.038 4125	9.867 8430	193	50	
	20	9.829 4535	230	9.961 6297	423	0.038 3703	9.867 8237	192	40	
	30	9.829 4765	230	9.961 6720	423	0.038 3280	9.867 8045	193	30	
	40	9.829 4995	229	9.961 7143	423	0.038 2857	9.867 7852	193	20	
	50	9.829 5224	230	9.961 7566	422	0.038 2434	9.867 7659	193	10	
29	0	9.829 5454	230	9.961 7988	423	0.038 2012	9.867 7466	193	0	31
	10	9.829 5684	230	9.961 8411	423	0.038 1589	9.867 7273	193	50	
	20	9.829 5914	230	9.961 8834	422	0.038 1166	9.867 7080	192	40	
	30	9.829 6144	230	9.961 9256	423	0.038 0744	9.867 6888	193	30	
	40	9.829 6374	230	9.961 9679	423	0.038 0321	9.867 6695	193	20	
	50	9.829 6604	229	9.962 0102	423	0.037 9898	9.867 6502	193	10	
30	0	9.829 6833		9.962 0525		0.037 9475	9.867 6309		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

47°

42°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.829 6833	230	9.962 0525	422	0.037 9475	9.867 6309	193	0	30
	10	9.829 7063	230	9.962 0947	423	0.037 9053	9.867 6116	193	50	
	20	9.829 7293	230	9.962 1370	423	0.037 8630	9.867 5923	193	40	
	30	9.829 7523	229	9.962 1793	422	0.037 8207	9.867 5730	193	30	
	40	9.829 7752	230	9.962 2215	423	0.037 7785	9.867 5537	193	20	
	50	9.829 7982	230	9.962 2638	423	0.037 7362	9.867 5344	193	10	
31	0	9.829 8212	229	9.962 3061	423	0.037 6939	9.867 5151	193	0	29
	10	9.829 8441	230	9.962 3484	422	0.037 6516	9.867 4958	193	50	
	20	9.829 8671	230	9.962 3906	423	0.037 6094	9.867 4765	195	40	
	30	9.829 8901	229	9.962 4329	423	0.037 5671	9.867 4572	193	30	
	40	9.829 9130	230	9.962 4752	422	0.037 5248	9.867 4379	194	20	
	50	9.829 9360	229	9.962 5174	423	0.037 4826	9.867 4185	193	10	
32	0	9.829 9589	230	9.962 5597	423	0.037 4403	9.867 3992	193	0	28
	10	9.829 9819	229	9.962 6020	422	0.037 3980	9.867 3799	193	50	
	20	9.830 0048	230	9.962 6442	423	0.037 3558	9.867 3606	193	40	
	30	9.830 0278	229	9.962 6865	423	0.037 3135	9.867 3413	194	30	
	40	9.830 0507	229	9.962 7288	422	0.037 2712	9.867 3219	193	20	
	50	9.830 0736	230	9.962 7710	423	0.037 2290	9.867 3026	193	10	
33	0	9.830 0966	229	9.962 8133	423	0.037 1867	9.867 2833	193	0	27
	10	9.830 1195	230	9.962 8556	422	0.037 1444	9.867 2640	194	50	
	20	9.830 1425	229	9.962 8978	423	0.037 1022	9.867 2446	193	40	
	30	9.830 1654	229	9.962 9401	422	0.037 0599	9.867 2253	193	30	
	40	9.830 1883	229	9.962 9823	423	0.037 0177	9.867 2060	194	20	
	50	9.830 2112	230	9.963 0246	423	0 036 9754	9.867 1866	193	10	
34	0	9.830 2342	229	9.963 0669	422	0.036 9331	9.867 1673	193	0	26
	10	9.830 2571	229	9.963 1091	423	0.036 8909	9.867 1480	194	50	
	20	9.830 2800	229	9.963 1514	423	0.036 8486	9.867 1286	193	40	
	30	9.830 3029	229	9.963 1937	422	0.036 8063	9.867 1093	194	30	
	40	9.830 3258	230	9.963 2359	423	0.036 7641	9.867 0899	193	20	
	50	9.830 3488	229	9.963 2782	422	0.036 7218	9.867 0706	194	10	
35	0	9.830 3717	229	9.963 3204	423	0.036 6796	9.867 0512	193	0	25
	10	9.830 3946	229	9.963 3627	423	0.036 6373	9.867 0319	194	50	
	20	9.830 4175	229	9.963 4050	422	0.036 5950	9.867 0125	193	40	
	30	9.830 4404	229	9.963 4472	423	0.036 5528	9.866 9932	194	30	
	40	9.830 4633	229	9.963 4895	422	0.036 5105	9.866 9738	193	20	
	50	9.830 4862	229	9.963 5317	423	0.036 4683	9.866 9545	194	10	
36	0	9.830 5091	229	9.963 5740	423	0.036 4260	9.866 9351	194	0	24
	10	9.830 5320	229	9.963 6163	422	0.036 3837	9.866 9157	193	50	
	20	9.830 5549	229	9.963 6585	423	0.036 3415	9.866 8964	194	40	
	30	9.830 5778	229	9.963 7008	422	0.036 2992	9.866 8770	194	30	
	40	9.830 6007	229	9.963 7430	423	0.036 2570	9.866 8576	193	20	
	50	9.830 6236	228	9.963 7853	422	0.036 2147	9.866 8383	194	10	
37	0	9.830 6464	229	9.963 8275	423	0.036 1725	9.866 8189	194	0	23
	10	9.830 6693	229	9.963 8698	423	0.036 1302	9.866 7995	194	50	
	20	9.830 6922	229	9.963 9121	422	0.036 0879	9.866 7801	193	40	
	30	9.830 7151	229	9.963 9543	423	0.036 0457	9.866 7608	194	30	
	40	9.830 7380	228	9.963 9966	422	0.036 0034	9.866 7414	194	20	
	50	9.830 7608	229	9.964 0388	423	0.035 9612	9.866 7220	194	10	
38	0	9.830 7837	229	9.964 0811	422	0.035 9189	9.866 7026	194	0	22
	10	9.830 8066	228	9.964 1233	423	0.035 8767	9.866 6832	193	50	
	20	9.830 8294	229	9.964 1656	422	0.035 8344	9.866 6639	194	40	
	30	9.830 8523	229	9.964 2078	423	0.035 7922	9.866 6445	194	30	
	40	9.830 8752	228	9.964 2501	422	0.035 7499	9.866 6251	194	20	
	50	9.830 8980	229	9.964 2923	423	0.035 7077	9.866 6057	194	10	
39	0	9.830 9209	228	9.964 3346	422	0.035 6654	9.866 5863	194	0	21
	10	9.830 9437	229	9.964 3768	423	0.035 6232	9.866 5669	194	50	
	20	9.830 9666	228	9.964 4191	423	0.035 5809	9.866 5475	194	40	
	30	9.830 9894	229	9.964 4614	422	0.035 5386	9.866 5281	194	30	
	40	9.831 0123	228	9.964 5036	423	0.035 4964	9.866 5087	194	20	
	50	9.831 0351	229	9.964 5459	422	0.035 4541	9.866 4893	194	10	
40	0	9.831 0580		9.964 5881		0.035 4119	9.866 4699		0	20
′	″	Cos	d	Cotg	d. c.	Tang	Sin	d.	″	′

47°

	423
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	229
1	22.9
2	45.8
3	68.7
4	91.6
5	114.5
6	137.4
7	160.3
8	183.2
9	206.1

	228
1	22.8
2	45.6
3	68.4
4	91.2
5	114.0
6	136.8
7	159.6
8	182.4
9	205.2

	193
1	19.3
2	38.6
3	57.9
4	77.2
5	96.5
6	115.8
7	135.1
8	154.4
9	173.7

	194
1	19.4
2	38.8
3	58.2
4	77.6
5	97.0
6	116.4
7	135.8
8	155.2
9	174.6

42°

423	
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

229	
1	22.9
2	45.8
3	68.7
4	91.6
5	114.5
6	137.4
7	160.3
8	183.2
9	206.1

228	
1	22.8
2	45.6
3	68.4
4	91.2
5	114.0
6	136.8
7	159.6
8	182.4
9	205.2

227	
1	22.7
2	45.4
3	68.1
4	90.8
5	113.5
6	136.2
7	158.9
8	181.6
9	204.3

194	
1	19.4
2	38.8
3	58.2
4	77.6
5	97.0
6	116.4
7	135.8
8	155.2
9	174.6

195	
1	19.5
2	39.0
3	58.5
4	78.0
5	97.5
6	117.0
7	136.5
8	156.0
9	175.5

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.831 0580	228	9.964 5881	423	0.035 4119	9.866 4699	194	0	2
	10	9.831 0808	229	9.964 6304	422	0.035 3696	9.866 4505	194	50	
	20	9.831 1037	228	9.964 6726	423	0.035 3274	9.866 4311	194	40	
	30	9.831 1265	228	9.964 7149	422	0.035 2851	9.866 4117	195	30	
	40	9.831 1493	229	9.964 7571	423	0.035 2429	9.866 3922	194	20	
	50	9.831 1722	228	9.964 7994	422	0.035 2006	9.866 3728	194	10	
41	0	9.831 1950	228	9.964 8416	422	0.035 1584	9.866 3534	194	0	1
	10	9.831 2178	229	9.964 8838	423	0.035 1162	9.866 3340	194	50	
	20	9.831 2407	228	9.964 9261	422	0.035 0739	9.866 3146	194	40	
	30	9.831 2635	228	9.964 9683	423	0.035 0317	9.866 2952	195	30	
	40	9.831 2863	228	9.965 0106	422	0.034 9894	9.866 2757	194	20	
	50	9.831 3091	229	9.965 0528	423	0.034 9472	9.866 2563	194	10	
42	0	9.831 3320	228	9.965 0951	422	0.034 9049	9.866 2369	195	0	1
	10	9.831 3548	228	9.965 1373	423	0.034 8627	9.866 2174	194	50	
	20	9.831 3776	228	9.965 1796	422	0.034 8204	9.866 1980	194	40	
	30	9.831 4004	228	9.965 2218	423	0.034 7782	9.866 1786	195	30	
	40	9.831 4232	228	9.965 2641	422	0.034 7359	9.866 1591	194	20	
	50	9.831 4460	228	9.965 3063	423	0.034 6937	9.866 1397	194	10	
43	0	9.831 4688	228	9.965 3486	422	0.034 6514	9.866 1203	195	0	17
	10	9.831 4916	228	9.965 3908	422	0.034 6092	9.866 1008	194	50	
	20	9.831 5144	228	9.965 4330	423	0.034 5670	9.866 0814	195	40	
	30	9.831 5372	228	9.965 4753	422	0.034 5247	9.866 0619	194	30	
	40	9.831 5600	228	9.965 5175	423	0.034 4825	9.866 0425	195	20	
	50	9.831 5828	228	9.965 5598	422	0.034 4402	9.866 0230	194	10	
44	0	9.831 6056	228	9.965 6020	423	0.034 3980	9.866 0036	195	0	16
	10	9.831 6284	228	9.965 6443	422	0.034 3557	9.865 9841	194	50	
	20	9.831 6512	228	9.965 6865	422	0.034 3135	9.865 9647	195	40	
	30	9.831 6740	228	9.965 7287	423	0.034 2713	9.865 9452	194	30	
	40	9.831 6968	227	9.965 7710	422	0.034 2290	9.865 9258	195	20	
	50	9.831 7195	228	9.965 8132	423	0.034 1868	9.865 9063	195	10	
45	0	9.831 7423	228	9.965 8555	422	0.034 1445	9.865 8868	194	0	15
	10	9.831 7651	228	9.965 8977	423	0.034 1023	9.865 8674	195	50	
	20	9.831 7879	227	9.965 9400	422	0.034 0600	9.865 8479	195	40	
	30	9.831 8106	228	9.965 9822	422	0.034 0178	9.865 8284	194	30	
	40	9.831 8334	228	9.966 0244	423	0.033 9756	9.865 8090	195	20	
	50	9.831 8562	227	9.966 0667	422	0.033 9333	9.865 7895	195	10	
46	0	9.831 8789	228	9.966 1089	422	0.033 8911	9.865 7700	194	0	14
	10	9.831 9017	228	9.966 1511	423	0.033 8489	9.865 7506	195	50	
	20	9.831 9245	227	9.966 1934	422	0.033 8066	9.865 7311	195	40	
	30	9.831 9472	228	9.966 2356	423	0.033 7644	9.865 7116	195	30	
	40	9.831 9700	227	9.966 2779	422	0.033 7221	9.865 6921	195	20	
	50	9.831 9927	228	9.966 3201	422	0.033 6799	9.865 6726	195	10	
47	0	9.832 0155	227	9.966 3623	423	0.033 6377	9.865 6531	194	0	13
	10	9.832 0382	228	9.966 4046	422	0.033 5954	9.865 6337	195	50	
	20	9.832 0610	227	9.966 4468	422	0.033 5532	9.865 6142	195	40	
	30	9.832 0837	228	9.966 4890	423	0.033 5110	9.865 5947	195	30	
	40	9.832 1065	227	9.966 5313	422	0.033 4687	9.865 5752	195	20	
	50	9.832 1292	227	9.966 5735	422	0.033 4265	9.865 5557	195	10	
48	0	9.832 1519	228	9.966 6157	423	0.033 3843	9.865 5362	195	0	12
	10	9.832 1747	227	9.966 6580	422	0.033 3420	9.865 5167	195	50	
	20	9.832 1974	227	9.966 7002	423	0.033 2998	9.865 4972	195	40	
	30	9.832 2201	228	9.966 7425	422	0.033 2575	9.865 4777	195	30	
	40	9.832 2429	227	9.966 7847	422	0.033 2153	9.865 4582	195	20	
	50	9.832 2656	227	9.966 8269	423	0.033 1731	9.865 4387	195	10	
49	0	9.832 2883	228	9.966 8692	422	0.033 1308	9.865 4192	195	0	11
	10	9.832 3111	227	9.966 9114	422	0.033 0886	9.865 3997	195	50	
	20	9.832 3338	227	9.966 9536	422	0.033 0464	9.865 3802	196	40	
	30	9.832 3565	227	9.966 9958	423	0.033 0042	9.865 3606	195	30	
	40	9.832 3792	227	9.967 0381	422	0.032 9619	9.865 3411	195	20	
	50	9.832 4019	227	9.967 0803	422	0.032 9197	9.865 3216	195	10	
50	0	9.832 4246		9.967 1225		0.032 8775	9.865 3021		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

47°

42°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.832 4246	227	9.967 1225	423	0.032 8775	9.865 3021	195	0	10
	10	9.832 4473	228	9.967 1648	422	0.032 8352	9.865 2826	196	50	
	20	9.832 4701	227	9.967 2070	422	0.032 7930	9.865 2630	195	40	
	30	9.832 4928	227	9.967 2492	423	0.032 7508	9.865 2435	195	30	
	40	9.832 5155	227	9.967 2915	422	0.032 7085	9.865 2240	195	20	
	50	9.832 5382	227	9.967 3337	422	0.032 6663	9.865 2045	196	10	
51	0	9.832 5609	227	9.967 3759	423	0.032 6241	9.865 1849	195	0	9
	10	9.832 5836	227	9.967 4182	422	0.032 5818	9.865 1654	195	50	
	20	9.832 6063	226	9.967 4604	422	0.032 5396	9.865 1459	196	40	
	30	9.832 6289	227	9.967 5026	422	0.032 4974	9.865 1263	195	30	
	40	9.832 6516	227	9.967 5448	423	0.032 4552	9.865 1068	195	20	
	50	9.832 6743	227	9.967 5871	422	0.032 4129	9.865 0873	196	10	
52	0	9.832 6970	227	9.967 6293	422	0.032 3707	9.865 0677	195	0	8
	10	9.832 7197	227	9.967 6715	422	0.032 3285	9.865 0482	196	50	
	20	9.832 7424	227	9.967 7137	423	0.032 2863	9.865 0286	195	40	
	30	9.832 7651	226	9.967 7560	422	0.032 2440	9.865 0091	196	30	
	40	9.832 7877	227	9.967 7982	422	0.032 2018	9.864 9895	195	20	
	50	9.832 8104	227	9.967 8404	423	0.032 1596	9.864 9700	196	10	
53	0	9.832 8331	226	9.967 8827	422	0.032 1173	9.864 9504	195	0	7
	10	9.832 8557	227	9.967 9249	422	0.032 0751	9.864 9309	196	50	
	20	9.832 8784	227	9.967 9671	422	0.032 0329	9.864 9113	195	40	
	30	9.832 9011	226	9.968 0093	423	0.031 9907	9.864 8918	196	30	
	40	9.832 9237	227	9.968 0516	422	0.031 9484	9.864 8722	196	20	
	50	9.832 9464	227	9.968 0938	422	0.031 9062	9.864 8526	195	10	
54	0	9.832 9691	226	9.968 1360	422	0.031 8640	9.864 8331	196	0	6
	10	9.832 9917	227	9.968 1782	422	0.031 8218	9.864 8135	196	50	
	20	9.833 0144	226	9.968 2204	423	0.031 7796	9.864 7939	195	40	
	30	9.833 0370	227	9.968 2627	422	0.031 7373	9.864 7744	196	30	
	40	9.833 0597	226	9.968 3049	422	0.031 6951	9.864 7548	196	20	
	50	9.833 0823	227	9.968 3471	422	0.031 6529	9.864 7352	196	10	
55	0	9.833 1050	226	9.968 3893	423	0.031 6107	9.864 7156	195	0	5
	10	9.833 1276	227	9.968 4316	422	0.031 5684	9.864 6961	196	50	
	20	9.833 1503	226	9.968 4738	422	0.031 5262	9.864 6765	196	40	
	30	9.833 1729	226	9.968 5160	422	0.031 4840	9.864 6569	196	30	
	40	9.833 1955	227	9.968 5582	422	0.031 4418	9.864 6373	196	20	
	50	9.833 2182	226	9.968 6004	423	0.031 3996	9.864 6177	196	10	
56	0	9.833 2408	226	9.968 6427	422	0.031 3573	9.864 5981	196	0	4
	10	9.833 2634	227	9.968 6849	422	0.031 3151	9.864 5785	195	50	
	20	9.833 2861	226	9.968 7271	422	0.031 2729	9.864 5590	196	40	
	30	9.833 3087	226	9.968 7693	422	0.031 2307	9.864 5394	196	30	
	40	9.833 3313	226	9.968 8115	423	0.031 1885	9.864 5198	196	20	
	50	9.833 3539	227	9.968 8538	422	0.031 1462	9.864 5002	196	10	
57	0	9.833 3766	226	9.968 8960	422	0.031 1040	9.864 4806	196	0	3
	10	9.833 3992	226	9.968 9382	422	0.031 0618	9.864 4610	196	50	
	20	9.833 4218	226	9.968 9804	422	0.031 0196	9.864 4414	196	40	
	30	9.833 4444	226	9.969 0226	423	0.030 9774	9.864 4218	196	30	
	40	9.833 4670	226	9.969 0649	422	0.030 9351	9.864 4022	197	20	
	50	9.833 4896	226	9.969 1071	422	0.030 8929	9.864 3825	196	10	
58	0	9.833 5122	226	9.969 1493	422	0.030 8507	9.864 3629	196	0	2
	10	9.833 5348	226	9.969 1915	422	0.030 8085	9.864 3433	196	50	
	20	9.833 5574	226	9.969 2337	422	0.030 7663	9.864 3237	196	40	
	30	9.833 5800	226	9.969 2759	423	0.030 7241	9.864 3041	196	30	
	40	9.833 6026	226	9.969 3182	422	0.030 6818	9.864 2845	196	20	
	50	9.833 6252	226	9.969 3604	422	0.030 6396	9.864 2649	197	10	
59	0	9.833 6478	226	9.969 4026	422	0.030 5974	9.864 2452	196	0	1
	10	9.833 6704	226	9.969 4448	422	0.030 5552	9.864 2256	196	50	
	20	9.833 6930	226	9.969 4870	422	0.030 5130	9.864 2060	196	40	
	30	9.833 7156	226	9.969 5292	422	0.030 4708	9.864 1864	197	30	
	40	9.833 7382	226	9.969 5714	423	0.030 4286	9.864 1667	196	20	
	50	9.833 7608	225	9.969 6137	422	0.030 3863	9.864 1471	196	10	
60	0	9.833 7833		9.969 6559		0.030 3441	9.864 1275		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

423	
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

226	
1	22.6
2	45.2
3	67.8
4	90.4
5	113.0
6	135.6
7	158.2
8	180.8
9	203.4

225	
1	22.5
2	45.0
3	67.5
4	90.0
5	112.5
6	135.0
7	157.5
8	180.0
9	202.5

196	
1	19.6
2	39.2
3	58.8
4	78.4
5	98.0
6	117.6
7	137.2
8	156.8
9	176.4

197	
1	19.7
2	39.4
3	59.1
4	78.8
5	98.5
6	118.2
7	137.9
8	157.6
9	177.3

47°

43°

423	
1	42.3
2	84.6
3	126.9
4	169.2
5	211.5
6	253.8
7	296.1
8	338.4
9	380.7

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

226	
1	22.6
2	45.2
3	67.8
4	90.4
5	113.0
6	135.6
7	158.2
8	180.8
9	203.4

225	
1	22.5
2	45.0
3	67.5
4	90.0
5	112.5
6	135.0
7	157.5
8	180.0
9	202.5

196	
1	19.6
2	39.2
3	58.8
4	78.4
5	98.0
6	117.6
7	137.2
8	156.8
9	176.4

197	
1	19.7
2	39.4
3	59.1
4	78.8
5	98.5
6	118.2
7	137.9
8	157.6
9	177.3

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
0	0	9.833 7833	226	9.969 6559	422	0.030 3441	9.864 1275	197	0	60
	10	9.833 8059	226	9.969 6981	422	0.030 3019	9.864 1078	196	50	
	20	9.833 8285	226	9.969 7403	422	0.030 2597	9.864 0882	196	40	
	30	9.833 8511	225	9.969 7825	422	0.030 2175	9.864 0686	197	30	
	40	9.833 8736	226	9.969 8247	422	0.030 1753	9.864 0489	196	20	
	50	9.833 8962	226	9.969 8669	422	0.030 1331	9.864 0293	197	10	
1	0	9.833 9188	225	9.969 9091	423	0.030 0909	9.864 0096	196	0	59
	10	9.833 9413	226	9.969 9514	422	0.030 0486	9.863 9900	197	50	
	20	9.833 9639	226	9.969 9936	422	0.030 0064	9.863 9703	196	40	
	30	9.833 9865	225	9.970 0358	422	0.029 9642	9.863 9507	197	30	
	40	9.834 0090	226	9.970 0780	422	0.029 9220	9.863 9310	196	20	
	50	9.834 0316	225	9.970 1202	422	0.029 8798	9.863 9114	197	10	
2	0	9.834 0541	226	9.970 1624	422	0.029 8376	9.863 8917	196	0	58
	10	9.834 0767	225	9.970 2046	422	0.029 7954	9.863 8721	197	50	
	20	9.834 0992	226	9.970 2468	422	0.029 7532	9.863 8524	197	40	
	30	9.834 1218	225	9.970 2890	422	0.029 7110	9.863 8327	196	30	
	40	9.834 1443	226	9.970 3312	423	0.029 6688	9.863 8131	197	20	
	50	9.834 1669	225	9.970 3735	422	0.029 6265	9.863 7934	197	10	
3	0	9.834 1894	225	9.970 4157	422	0.029 5843	9.863 7737	196	0	57
	10	9.834 2119	226	9.970 4579	422	0.029 5421	9.863 7541	197	50	
	20	9.834 2345	225	9.970 5001	422	0.029 4999	9.863 7344	197	40	
	30	9.834 2570	225	9.970 5423	422	0.029 4577	9.863 7147	197	30	
	40	9.834 2795	226	9.970 5845	422	0.029 4155	9.863 6950	196	20	
	50	9.834 3021	225	9.970 6267	422	0.029 3733	9.863 6754	197	10	
4	0	9.834 3246	225	9.970 6689	422	0.029 3311	9.863 6557	197	0	56
	10	9.834 3471	225	9.970 7111	422	0.029 2889	9.863 6360	197	50	
	20	9.834 3696	226	9.970 7533	422	0.029 2467	9.863 6163	197	40	
	30	9.834 3922	225	9.970 7955	422	0.029 2045	9.863 5966	196	30	
	40	9.834 4147	225	9.970 8377	422	0.029 1623	9.863 5770	197	20	
	50	9.834 4372	225	9.970 8799	422	0.029 1201	9.863 5573	197	10	
5	0	9.834 4597	225	9.970 9221	422	0.029 0779	9.863 5376	197	0	55
	10	9.834 4822	225	9.970 9643	422	0.029 0357	9.863 5179	197	50	
	20	9.834 5047	225	9.971 0065	422	0.028 9935	9.863 4982	197	40	
	30	9.834 5272	225	9.971 0487	423	0.028 9513	9.863 4785	197	30	
	40	9.834 5497	226	9.971 0910	422	0.028 9090	9.863 4588	197	20	
	50	9.834 5723	225	9.971 1332	422	0.028 8668	9.863 4391	197	10	
6	0	9.834 5948	225	9.971 1754	422	0.028 8246	9.863 4194	197	0	54
	10	9.834 6173	224	9.971 2176	422	0.028 7824	9.863 3997	197	50	
	20	9.834 6397	225	9.971 2598	422	0.028 7402	9.863 3800	197	40	
	30	9.834 6622	225	9.971 3020	422	0.028 6980	9.863 3603	197	30	
	40	9.834 6847	225	9.971 3442	422	0.028 6558	9.863 3406	197	20	
	50	9.834 7072	225	9.971 3864	422	0.028 6136	9.863 3209	198	10	
7	0	9.834 7297	225	9.971 4286	422	0.028 5714	9.863 3011	197	0	53
	10	9.834 7522	225	9.971 4708	422	0.028 5292	9.863 2814	197	50	
	20	9.834 7747	225	9.971 5130	422	0.028 4870	9.863 2617	197	40	
	30	9.834 7972	224	9.971 5552	422	0.028 4448	9.863 2420	197	30	
	40	9.834 8196	225	9.971 5974	422	0.028 4026	9.863 2223	198	20	
	50	9.834 8421	225	9.971 6396	422	0.028 3604	9.863 2025	197	10	
8	0	9.834 8646	225	9.971 6818	422	0.028 3182	9.863 1828	197	0	52
	10	9.834 8871	224	9.971 7240	422	0.028 2760	9.863 1631	197	50	
	20	9.834 9095	225	9.971 7662	422	0.028 2338	9.863 1434	198	40	
	30	9.834 9320	225	9.971 8084	422	0.028 1916	9.863 1236	197	30	
	40	9.834 9545	224	9.971 8506	422	0.028 1494	9.863 1039	197	20	
	50	9.834 9769	225	9.971 8928	422	0.028 1072	9.863 0842	198	10	
9	0	9.834 9994	225	9.971 9350	422	0.028 0650	9.863 0644	197	0	51
	10	9.835 0219	224	9.971 9772	422	0.028 0228	9.863 0447	198	50	
	20	9.835 0443	225	9.972 0194	422	0.027 9806	9.863 0249	197	40	
	30	9.835 0668	224	9.972 0616	422	0.027 9384	9.863 0052	197	30	
	40	9.835 0892	225	9.972 1038	422	0.027 8962	9.862 9855	198	20	
	50	9.835 1117	224	9.972 1460	422	0.027 8540	9.862 9657	197	10	
10	0	9.835 1341		9.972 1882		0.027 8118	9.862 9460		0	50
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

46°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
10	0	9.835 1341	225	9.972 1882	422	0.027 8118	9.862 9460	198	0	50
	10	9.835 1566	224	9.972 2304	422	0.027 7696	9.862 9262	197	50	
	20	9.835 1790	225	9.972 2726	421	0.027 7274	9.862 9065	198	40	
	30	9.835 2015	224	9.972 3147	422	0.027 6853	9.862 8867	197	30	
	40	9.835 2239	224	9.972 3569	422	0.027 6431	9.862 8670	198	20	
	50	9.835 2463	225	9.972 3991	422	0.027 6009	9.862 8472	198	10	
11	0	9.835 2688	224	9.972 4413	422	0.027 5587	9.862 8274	197	0	49
	10	9.835 2912	224	9.972 4835	422	0.027 5165	9.862 8077	198	50	
	20	9.835 3136	225	9.972 5257	422	0.027 4743	9.862 7879	198	40	
	30	9.835 3361	224	9.972 5679	422	0.027 4321	9.862 7681	197	30	
	40	9.835 3585	224	9.972 6101	422	0.027 3899	9.862 7484	198	20	
	50	9.835 3809	224	9.972 6523	422	0.027 3477	9.862 7286	198	10	
12	0	9.835 4033	225	9.972 6945	422	0.027 3055	9.862 7088	197	0	48
	10	9.835 4258	224	9.972 7367	422	0.027 2633	9.862 6891	198	50	
	20	9.835 4482	224	9.972 7789	422	0.027 2211	9.862 6693	198	40	
	30	9.835 4706	224	9.972 8211	422	0.027 1789	9.862 6495	198	30	
	40	9.835 4930	224	9.972 8633	422	0.027 1367	9.862 6297	197	20	
	50	9.835 5154	224	9.972 9055	422	0.027 0945	9.862 6100	198	10	
13	0	9.835 5378	224	9.972 9477	421	0.027 0523	9.862 5902	198	0	47
	10	9.835 5602	224	9.972 9898	422	0.027 0102	9.862 5704	198	50	
	20	9.835 5826	224	9.973 0320	422	0.026 9680	9.862 5506	198	40	
	30	9.835 6050	224	9.973 0742	422	0.026 9258	9.862 5308	198	30	
	40	9.835 6274	224	9.973 1164	422	0.026 8836	9.862 5110	198	20	
	50	9.835 6498	224	9.973 1586	422	0.026 8414	9.862 4912	198	10	
14	0	9.835 6722	224	9.973 2008	422	0.026 7992	9.862 4714	198	0	46
	10	9.835 6946	224	9.973 2430	422	0.026 7570	9.862 4516	198	50	
	20	9.835 7170	224	9.973 2852	422	0.026 7148	9.862 4318	198	40	
	30	9.835 7394	224	9.973 3274	422	0.026 6726	9.862 4120	198	30	
	40	9.835 7618	224	9.973 3696	422	0.026 6304	9.862 3922	198	20	
	50	9.835 7842	224	9.973 4118	421	0.026 5882	9.862 3724	198	10	
15	0	9.835 8066	224	9.973 4539	422	0.026 5461	9.862 3526	198	0	45
	10	9.835 8290	223	9.973 4961	422	0.026 5039	9.862 3328	198	50	
	20	9.835 8513	224	9.973 5383	422	0.026 4617	9.862 3130	198	40	
	30	9.835 8737	224	9.973 5805	422	0.026 4195	9.862 2932	198	30	
	40	9.835 8961	224	9.973 6227	422	0.026 3773	9.862 2734	198	20	
	50	9.835 9185	223	9.973 6649	422	0.026 3351	9.862 2536	198	10	
16	0	9.835 9408	224	9.973 7071	422	0.026 2929	9.862 2338	199	0	44
	10	9.835 9632	224	9.973 7493	421	0.026 2507	9.862 2139	198	50	
	20	9.835 9856	223	9.973 7914	422	0.026 2086	9.862 1941	198	40	
	30	9.836 0079	224	9.973 8336	422	0.026 1664	9.862 1743	198	30	
	40	9.836 0303	223	9.973 8758	422	0.026 1242	9.862 1545	199	20	
	50	9.836 0526	224	9.973 9180	422	0.026 0820	9.862 1346	198	10	
17	0	9.836 0750	224	9.973 9602	422	0.026 0398	9.862 1148	198	0	43
	10	9.836 0974	223	9.974 0024	422	0.025 9976	9.862 0950	199	50	
	20	9.836 1197	224	9.974 0446	422	0.025 9554	9.862 0751	198	40	
	30	9.836 1421	223	9.974 0868	421	0.025 9132	9.862 0553	198	30	
	40	9.836 1644	224	9.974 1289	422	0.025 8711	9.862 0355	199	20	
	50	9.836 1868	223	9.974 1711	422	0.025 8289	9.862 0156	198	10	
18	0	9.836 2091	223	9.974 2133	422	0.025 7867	9.861 9958	198	0	42
	10	9.836 2314	224	9.974 2555	422	0.025 7445	9.861 9760	199	50	
	20	9.836 2538	223	9.974 2977	422	0.025 7023	9.861 9561	198	40	
	30	9.836 2761	224	9.974 3399	421	0.025 6601	9.861 9363	199	30	
	40	9.836 2985	223	9.974 3820	422	0.025 6180	9.861 9164	198	20	
	50	9.836 3208	223	9.974 4242	422	0.025 5758	9.861 8966	199	10	
19	0	9.836 3431	224	9.974 4664	422	0.025 5336	9.861 8767	198	0	41
	10	9.836 3655	223	9.974 5086	422	0.025 4914	9.861 8569	199	50	
	20	9.836 3878	223	9.974 5508	422	0.025 4492	9.861 8370	199	40	
	30	9.836 4101	223	9.974 5930	421	0.025 4070	9.861 8171	198	30	
	40	9.836 4324	223	9.974 6351	422	0.025 3649	9.861 7973	199	20	
	50	9.836 4547	224	9.974 6773	422	0.025 3227	9.861 7774	198	10	
20	0	9.836 4771		9.974 7195		0.025 2805	9.861 7576		0	40
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

224	
1	22.4
2	44.8
3	67.2
4	89.6
5	112.0
6	134.4
7	156.8
8	179.2
9	201.6

223	
1	22.3
2	44.6
3	66.9
4	89.2
5	111.5
6	133.8
7	156.1
8	178.4
9	200.7

198	
1	19.8
2	39.6
3	59.4
4	79.2
5	99.0
6	118.8
7	138.6
8	158.4
9	178.2

199	
1	19.9
2	39.8
3	59.7
4	79.6
5	99.5
6	119.4
7	139.3
8	159.2
9	179.1

43°

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

223	
1	22.3
2	44.6
3	66.9
4	89.2
5	111.5
6	133.8
7	156.1
8	178.4
9	200.7

222	
1	22.2
2	44.4
3	66.6
4	88.8
5	111.0
6	133.2
7	155.4
8	177.6
9	199.8

198	
1	19.8
2	39.6
3	59.4
4	79.2
5	99.0
6	118.8
7	138.6
8	158.4
9	178.2

199	
1	19.9
2	39.8
3	59.7
4	79.6
5	99.5
6	119.4
7	139.3
8	159.2
9	179.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.836 4771	223	9.974 7195	422	0.025 2805	9.861 7576	199	0	40
	10	9.836 4994	223	9.974 7617	422	0.025 2383	9.861 7377	199	50	
	20	9.836 5217	223	9.974 8039	422	0.025 1961	9.861 7178	198	40	
	30	9.836 5440	223	9.974 8461	421	0.025 1539	9.861 6980	199	30	
	40	9.836 5663	223	9.974 8882	422	0.025 1118	9.861 6781	199	20	
	50	9.836 5886	223	9.974 9304	422	0.025 0696	9.861 6582	199	10	
21	0	9.836 6109	223	9.974 9726	422	0.025 0274	9.861 6383	198	0	39
	10	9.836 6332	223	9.975 0148	422	0.024 9852	9.861 6185	199	50	
	20	9.836 6555	223	9.975 0570	421	0.024 9430	9.861 5986	199	40	
	30	9.836 6778	223	9.975 0991	422	0.024 9009	9.861 5787	199	30	
	40	9.836 7001	223	9.975 1413	422	0.024 8587	9.861 5588	199	20	
	50	9.836 7224	223	9.975 1835	422	0.024 8165	9.861 5389	199	10	
22	0	9.836 7447	223	9.975 2257	421	0.024 7743	9.861 5190	198	0	38
	10	9.836 7670	223	9.975 2678	422	0.024 7322	9.861 4992	199	50	
	20	9.836 7893	223	9.975 3100	422	0.024 6900	9.861 4793	199	40	
	30	9.836 8116	223	9.975 3522	422	0.024 6478	9.861 4594	199	30	
	40	9.836 8339	222	9.975 3944	422	0.024 6056	9.861 4395	199	20	
	50	9.836 8561	223	9.975 4366	421	0.024 5634	9.861 4196	199	10	
23	0	9.836 8784	223	9.975 4787	422	0.024 5213	9.861 3997	199	0	37
	10	9.836 9007	223	9.975 5209	422	0.024 4791	9.861 3798	199	50	
	20	9.836 9230	222	9.975 5631	422	0.024 4369	9.861 3599	199	40	
	30	9.836 9452	223	9.975 6053	421	0.024 3947	9.861 3400	199	30	
	40	9.836 9675	223	9.975 6474	422	0.024 3526	9.861 3201	199	20	
	50	9.836 9898	223	9.975 6896	422	0.024 3104	9.861 3002	199	10	
24	0	9.837 0121	222	9.975 7318	422	0.024 2682	9.861 2803	200	0	36
	10	9.837 0343	223	9.975 7740	422	0.024 2260	9.861 2603	199	50	
	20	9.837 0566	222	9.975 8162	421	0.024 1838	9.861 2404	199	40	
	30	9.837 0788	223	9.975 8583	422	0.024 1417	9.861 2205	199	30	
	40	9.837 1011	223	9.975 9005	422	0.024 0995	9.861 2006	199	20	
	50	9.837 1234	222	9.975 9427	422	0.024 0573	9.861 1807	199	10	
25	0	9.837 1456	223	9.975 9849	421	0.024 0151	9.861 1608	200	0	35
	10	9.837 1679	222	9.976 0270	422	0.023 9730	9.861 1408	199	50	
	20	9.837 1901	223	9.976 0692	422	0.023 9308	9.861 1209	199	40	
	30	9.837 2124	222	9.976 1114	422	0.023 8886	9.861 1010	200	30	
	40	9.837 2346	222	9.976 1536	421	0.023 8464	9.861 0810	199	20	
	50	9.837 2568	223	9.976 1957	422	0.023 8043	9.861 0611	199	10	
26	0	9.837 2791	222	9.976 2379	422	0.023 7621	9.861 0412	200	0	34
	10	9.837 3013	223	9.976 2801	421	0.023 7199	9.861 0212	199	50	
	20	9.837 3236	222	9.976 3222	422	0.023 6778	9.861 0013	199	40	
	30	9.837 3458	222	9.976 3644	422	0.023 6356	9.860 9814	200	30	
	40	9.837 3680	223	9.976 4066	422	0.023 5934	9.860 9614	199	20	
	50	9.837 3903	222	9.976 4488	421	0.023 5512	9.860 9415	200	10	
27	0	9.837 4125	222	9.976 4909	422	0.023 5091	9.860 9215	199	0	33
	10	9.837 4347	222	9.976 5331	422	0.023 4669	9.860 9016	200	50	
	20	9.837 4569	222	9.976 5753	421	0.023 4247	9.860 8816	199	40	
	30	9.837 4791	223	9.976 6174	422	0.023 3826	9.860 8617	200	30	
	40	9.837 5014	222	9.976 6596	422	0.023 3404	9.860 8417	199	20	
	50	9.837 5236	222	9.976 7018	422	0.023 2982	9.860 8218	200	10	
28	0	9.837 5458	222	9.976 7440	421	0.023 2560	9.860 8018	199	0	32
	10	9.837 5680	222	9.976 7861	422	0.023 2139	9.860 7819	200	50	
	20	9.837 5902	222	9.976 8283	422	0.023 1717	9.860 7619	199	40	
	30	9.837 6124	222	9.976 8705	421	0.023 1295	9.860 7420	200	30	
	40	9.837 6346	222	9.976 9126	422	0.023 0874	9.860 7220	200	20	
	50	9.837 6568	222	9.976 9548	422	0.023 0452	9.860 7020	199	10	
29	0	9.837 6790	222	9.976 9970	422	0.023 0030	9.860 6821	200	0	31
	10	9.837 7012	222	9.977 0392	421	0.022 9608	9.860 6621	200	50	
	20	9.837 7234	222	9.977 0813	422	0.022 9187	9.860 6421	200	40	
	30	9.837 7456	222	9.977 1235	422	0.022 8765	9.860 6221	199	30	
	40	9.837 7678	222	9.977 1657	421	0.022 8343	9.860 6022	200	20	
	50	9.837 7900	222	9.977 2078	422	0.022 7922	9.860 5822	200	10	
30	0	9.837 8122		9.977 2500		0.022 7500	9.860 5622		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

46°

43°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
30	0	9.837 8122	222	9.977 2500	422	0.022 7500	9.860 5622	200	0	30
	10	9.837 8344	222	9.977 2922	421	0.022 7078	9.860 5422	200	50	
	20	9.837 8566	222	9.977 3343	422	0.022 6657	9.860 5222	199	40	
	30	9.837 8788	221	9.977 3765	422	0.022 6235	9.860 5023	200	30	
	40	9.837 9009	222	9.977 4187	421	0.022 5813	9.860 4823	200	20	
	50	9.837 9231	222	9.977 4608	422	0.022 5392	9.860 4623	200	10	
31	0	9.837 9453	222	9.977 5030	422	0.022 4970	9.860 4423	200	0	29
	10	9.837 9675	221	9.977 5452	421	0.022 4548	9.860 4223	200	50	
	20	9.837 9896	222	9.977 5873	422	0.022 4127	9.860 4023	200	40	
	30	9.838 0118	222	9.977 6295	422	0.022 3705	9.860 3823	200	30	
	40	9.838 0340	221	9.977 6717	421	0.022 3283	9.860 3623	200	20	
	50	9.838 0561	222	9.977 7138	422	0.022 2862	9.860 3423	200	10	
32	0	9.838 0783	222	9.977 7560	422	0.022 2440	9.860 3223	200	0	28
	10	9.838 1005	221	9.977 7982	421	0.022 2018	9.860 3023	200	50	
	20	9.838 1226	222	9.977 8403	422	0.022 1597	9.860 2823	200	40	
	30	9.838 1448	221	9.977 8825	422	0.022 1175	9.860 2623	200	30	
	40	9.838 1669	222	9.977 9247	421	0.022 0753	9.860 2423	200	20	
	50	9.838 1891	221	9.977 9668	422	0.022 0332	9.860 2223	201	10	
33	0	9.838 2112	222	9.978 0090	422	0.021 9910	9.860 2022	200	0	27
	10	9.838 2334	221	9.978 0512	421	0.021 9488	9.860 1822	200	50	
	20	9.838 2555	222	9.978 0933	422	0.021 9067	9.860 1622	200	40	
	30	9.838 2777	221	9.978 1355	421	0.021 8645	9.860 1422	200	30	
	40	9.838 2998	221	9.978 1776	422	0.021 8224	9.860 1222	201	20	
	50	9.838 3219	222	9.978 2198	422	0.021 7802	9.860 1021	200	10	
34	0	9.838 3441	221	9.978 2620	421	0.021 7380	9.860 0821	200	0	26
	10	9.838 3662	222	9.978 3041	422	0.021 6959	9.860 0621	200	50	
	20	9.838 3884	221	9.978 3463	422	0.021 6537	9.860 0421	201	40	
	30	9.838 4105	221	9.978 3885	421	0.021 6115	9.860 0220	200	30	
	40	9.838 4326	221	9.978 4306	422	0.021 5694	9.860 0020	200	20	
	50	9.838 4547	222	9.978 4728	421	0.021 5272	9.859 9820	201	10	
35	0	9.838 4769	221	9.978 5149	422	0.021 4851	9.859 9619	200	0	25
	10	9.838 4990	221	9.978 5571	422	0.021 4429	9.859 9419	201	50	
	20	9.838 5211	221	9.978 5993	421	0.021 4007	9.859 9218	200	40	
	30	9.838 5432	221	9.978 6414	422	0.021 3586	9.859 9018	201	30	
	40	9.838 5653	221	9.978 6836	422	0.021 3164	9.859 8817	200	20	
	50	9.838 5874	222	9.978 7258	421	0.021 2742	9.859 8617	201	10	
36	0	9.838 6096	221	9.978 7679	422	0.021 2321	9.859 8416	200	0	24
	10	9.838 6317	221	9.978 8101	421	0.021 1899	9.859 8216	201	50	
	20	9.838 6538	221	9.978 8522	422	0.021 1478	9.859 8015	200	40	
	30	9.838 6759	221	9.978 8944	422	0.021 1056	9.859 7815	201	30	
	40	9.838 6980	221	9.978 9366	421	0.021 0634	9.859 7614	200	20	
	50	9.838 7201	221	9.978 9787	422	0.021 0213	9.859 7414	201	10	
37	0	9.838 7422	221	9.979 0209	421	0.020 9791	9.859 7213	201	0	23
	10	9.838 7643	221	9.979 0630	422	0.020 9370	9.859 7012	200	50	
	20	9.838 7864	221	9.979 1052	422	0.020 8948	9.859 6812	201	40	
	30	9.838 8085	221	9.979 1474	421	0.020 8526	9.859 6611	201	30	
	40	9.838 8306	220	9.979 1895	422	0.020 8105	9.859 6410	200	20	
	50	9.838 8526	221	9.979 2317	421	0.020 7683	9.859 6210	201	10	
38	0	9.838 8747	221	9.979 2738	422	0.020 7262	9.859 6009	201	0	22
	10	9.838 8968	221	9.979 3160	421	0.020 6840	9.859 5808	201	50	
	20	9.838 9189	221	9.979 3581	422	0.020 6419	9.859 5607	200	40	
	30	9.838 9410	220	9.979 4003	422	0.020 5997	9.859 5407	201	30	
	40	9.838 9630	221	9.979 4425	421	0.020 5575	9.859 5206	201	20	
	50	9.838 9851	221	9.979 4846	422	0.020 5154	9.859 5005	201	10	
39	0	9.839 0072	221	9.979 5268	421	0.020 4732	9.859 4804	201	0	21
	10	9.839 0293	220	9.979 5689	422	0.020 4311	9.859 4603	201	50	
	20	9.839 0513	221	9.979 6111	421	0.020 3889	9.859 4402	200	40	
	30	9.839 0734	221	9.979 6532	422	0.020 3468	9.859 4202	201	30	
	40	9.839 0955	220	9.979 6954	422	0.020 3046	9.859 4001	201	20	
	50	9.839 1175	221	9.979 7376	421	0.020 2624	9.859 3800	201	10	
40	0	9.839 1396		9.979 7797		0.020 2203	9.859 3599		0	20
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

46°

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	421
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

	221
1	22.1
2	44.2
3	66.3
4	88.4
5	110.5
6	132.6
7	154.7
8	176.8
9	198.9

	220
1	22.0
2	44.0
3	66.0
4	88.0
5	110.0
6	132.0
7	154.0
8	176.0
9	198.0

	200
1	20.0
2	40.0
3	60.0
4	80.0
5	100.0
6	120.0
7	140.0
8	160.0
9	180.

	201
1	20.1
2	40.2
3	60.3
4	80.4
5	100.5
6	120.6
7	140.7
8	160.8
9	180.9

43°

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

221	
1	22.1
2	44.2
3	66.3
4	88.4
5	110.5
6	132.6
7	154.7
8	176.8
9	198.9

220	
1	22.0
2	44.0
3	66.0
4	88.0
5	110.0
6	132.0
7	154.0
8	176.0
9	198.0

201	
1	20.1
2	40.2
3	60.3
4	80.4
5	100.5
6	120.6
7	140.7
8	160.8
9	180.9

202	
1	20.2
2	40.4
3	60.6
4	80.8
5	101.0
6	121.2
7	141.4
8	161.6
9	181.8

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
40	0	9.839 1396	220	9.979 7797	422	0.020 2203	9.859 3599	201	0	20
	10	9.839 1616	221	9.979 8219	421	0.020 1781	9.859 3398	201	50	
	20	9.839 1837	221	9.979 8640	422	0.020 1360	9.859 3197	201	40	
	30	9.839 2058	220	9.979 9062	421	0.020 0938	9.859 2996	201	30	
	40	9.839 2278	221	9.979 9483	422	0.020 0517	9.859 2795	201	20	
	50	9.839 2499	220	9.979 9905	421	0.020 0095	9.859 2594	201	10	
41	0	9.839 2719	220	9.980 0326	422	0.019 9674	9.859 2393	202	0	19
	10	9.839 2939	221	9.980 0748	422	0.019 9252	9.859 2191	201	50	
	20	9.839 3160	220	9.980 1170	421	0.019 8830	9.859 1990	201	40	
	30	9.839 3380	221	9.980 1591	422	0.019 8409	9.859 1789	201	30	
	40	9.839 3601	220	9.980 2013	421	0.019 7987	9.859 1588	201	20	
	50	9.839 3821	220	9.980 2434	422	0.019 7566	9.859 1387	201	10	
42	0	9.839 4041	221	9.980 2856	421	0.019 7144	9.859 1186	202	0	18
	10	9.839 4262	220	9.980 3277	422	0.019 6723	9.859 0984	201	50	
	20	9.839 4482	220	9.980 3699	421	0.019 6301	9.859 0783	201	40	
	30	9.839 4702	221	9.980 4120	422	0.019 5880	9.859 0582	201	30	
	40	9.839 4923	220	9.980 4542	421	0.019 5458	9.859 0381	202	20	
	50	9.839 5143	220	9.980 4963	422	0.019 5037	9.859 0179	201	10	
43	0	9.839 5363	220	9.980 5385	421	0.019 4615	9.858 9978	201	0	17
	10	9.839 5583	220	9.980 5806	422	0.019 4194	9.858 9777	202	50	
	20	9.839 5803	220	9.980 6228	422	0.019 3772	9.858 9575	201	40	
	30	9.839 6023	221	9.980 6650	421	0.019 3350	9.858 9374	201	30	
	40	9.839 6244	220	9.980 7071	422	0.019 2929	9.858 9173	202	20	
	50	9.839 6464	220	9.480 7493	421	0.019 2507	9.858 8971	201	10	
44	0	9.839 6684	220	9.980 7914	422	0.019 2086	9.858 8770	202	0	16
	10	9.839 6904	220	9.980 8336	421	0.019 1664	9.858 8568	201	50	
	20	9.839 7124	220	9.980 8757	422	0.019 1243	9.858 8367	202	40	
	30	9.839 7344	220	9.980 9179	421	0.019 0821	9.858 8165	201	30	
	40	9.839 7564	220	9.980 9600	422	0.019 0400	9.858 7964	202	20	
	50	9.839 7784	220	9.981 0022	421	0.018 9978	9.858 7762	201	10	
45	0	9.839 8004	220	9.981 0443	422	0.018 9557	9.858 7561	202	0	15
	10	9.839 8224	220	9.981 0865	421	0.018 9135	9.858 7359	201	50	
	20	9.839 8444	220	9.981 1286	422	0.018 8714	9.858 7158	202	40	
	30	9.839 8664	219	9.981 1708	421	0.018 8292	9.858 6956	202	30	
	40	9.839 8883	220	9.981 2129	422	0.018 7871	9.858 6754	201	20	
	50	9.839 9103	220	9.981 2551	421	0.018 7449	9.858 6553	202	10	
46	0	9.839 9323	220	9.981 2972	422	0.018 7028	9.858 6351	202	0	14
	10	9.839 9543	220	9.981 3394	421	0.018 6606	9.858 6149	201	50	
	20	9.839 9763	219	9.981 3815	422	0.018 6185	9.858 5948	202	40	
	30	9.839 9982	220	9.981 4237	421	0.018 5763	9.858 5746	202	30	
	40	9.840 0202	220	9.981 4658	422	0.018 5342	9.858 5544	202	20	
	50	9.840 0422	220	9.981 5080	421	0.018 4920	9.858 5342	201	10	
47	0	9.840 0642	219	9.981 5501	422	0.018 4499	9.858 5141	202	0	13
	10	9.840 0861	220	9.981 5923	421	0.018 4077	9.858 4939	202	50	
	20	9.840 1081	220	9.981 6344	422	0.018 3656	9.858 4737	202	40	
	30	9.840 1301	219	9.981 6766	421	0.018 3234	9.858 4535	202	30	
	40	9.840 1520	220	9.981 7187	421	0.018 2813	9.858 4333	202	20	
	50	9.840 1740	219	9.981 7608	422	0.018 2392	9.858 4131	202	10	
48	0	9.840 1959	220	9.981 8030	421	0.018 1970	9.858 3929	201	0	12
	10	9.840 2179	219	9.981 8451	422	0.018 1549	9.858 3728	202	50	
	20	9.840 2398	220	9.981 8873	421	0.018 1127	9.858 3526	202	40	
	30	9.840 2618	219	9.981 9294	422	0.018 0706	9.858 3324	202	30	
	40	9.840 2837	220	9.981 9716	421	0.018 0284	9.858 3122	202	20	
	50	9.840 3057	219	9.982 0137	422	0.017 9863	9.858 2920	202	10	
49	0	9.840 3276	220	9.982 0559	421	0.017 9441	9.858 2718	202	0	11
	10	9.840 3496	219	9.982 0980	422	0.017 9020	9.858 2516	202	50	
	20	9.840 3715	220	9.982 1402	421	0.017 8598	9.858 2314	203	40	
	30	9.840 3935	219	9.982 1823	422	0.017 8177	9.858 2111	202	30	
	40	9.840 4154	219	9.982 2245	421	0.017 7755	9.858 1909	202	20	
	50	9.840 4373	220	9.982 2666	421	0.017 7334	9.858 1707	202	10	
50	0	9.840 4593		9.982 3087		0.017 6913	9.858 1505		0	10
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

46°

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
50	0	9.840 4593	219	9.982 3087	422	0.017 6913	9.858 1505	202	0	10
	10	9.840 4812	219	9.982 3509	421	0.017 6491	9.858 1303	202	50	
	20	9.840 5031	219	9.982 3930	422	0.017 6070	9.858 1101	202	40	
	30	9.840 5250	220	9.982 4352	421	0.017 5648	9.858 0899	203	30	
	40	9.840 5470	219	9.982 4773	422	0.017 5227	9.858 0696	202	20	
	50	9.840 5689	219	9.982 5195	421	0.017 4805	9.858 0494	202	10	
51	0	9.840 5908	219	9.982 5616	422	0.017 4384	9.858 0292	202	0	9
	10	9.840 6127	219	9.982 6038	421	0.017 3962	9.858 0090	203	50	
	20	9.840 6346	219	9.982 6459	422	0.017 3541	9.857 9887	202	40	
	30	9.840 6565	220	9.982 6881	421	0.017 3119	9.857 9685	202	30	
	40	9.840 6785	219	9.982 7302	421	0.017 2698	9.857 9483	203	20	
	50	9.840 7004	219	9.982 7723	422	0.017 2277	9.857 9280	202	10	
52	0	9.840 7223	219	9.982 8145	421	0.017 1855	9.857 9078	202	0	8
	10	9.840 7442	219	9.982 8566	422	0.017 1434	9.857 8876	203	50	
	20	9.840 7661	219	9.982 8988	421	0.017 1012	9.857 8673	202	40	
	30	9.840 7880	219	9.982 9409	422	0.017 0591	9.857 8471	203	30	
	40	9.840 8099	219	9.982 9831	421	0.017 0169	9.857 8268	202	20	
	50	9.840 8318	219	9.983 0252	421	0.016 9748	9.857 8066	203	10	
53	0	9.840 8537	219	9.983 0673	422	0.016 9327	9.857 7863	202	0	7
	10	9.840 8756	218	9.983 1095	421	0.016 8905	9.857 7661	203	50	
	20	9.840 8974	219	9.983 1516	422	0.016 8484	9.857 7458	202	40	
	30	9.840 9193	219	9.983 1938	421	0.016 8062	9.857 7256	203	30	
	40	9.840 9412	219	9.983 2359	421	0.016 7641	9.857 7053	202	20	
	50	9.840 9631	219	9.983 2780	422	0.016 7220	9.857 6851	203	10	
54	0	9.840 9850	219	9.983 3202	421	0.016 6798	9.857 6648	203	0	6
	10	9.841 0069	218	9.983 3623	422	0.016 6377	9.857 6445	202	50	
	20	9.841 0287	219	9.983 4045	421	0.016 5955	9.857 6243	203	40	
	30	9.841 0506	219	9.983 4466	422	0.016 5534	9.857 6040	203	30	
	40	9.841 0725	219	9.983 4888	421	0.016 5112	9.857 5837	202	20	
	50	9.841 0944	218	9.983 5309	421	0.016 4691	9.857 5635	203	10	
55	0	9.841 1162	219	9.983 5730	422	0.016 4270	9.857 5432	203	0	5
	10	9.841 1381	219	9.983 6152	421	0.016 3848	9.857 5229	203	50	
	20	9.841 1600	218	9.983 6573	422	0.016 3427	9.857 5026	202	40	
	30	9.841 1818	219	9.983 6995	421	0.016 3005	9.857 4824	203	30	
	40	9.841 2037	218	9.983 7416	421	0.016 2584	9.857 4621	203	20	
	50	9.841 2255	219	9.983 7837	422	0.016 2163	9.857 4418	203	10	
56	0	9.841 2474	218	9.983 8259	421	0.016 1741	9.857 4215	203	0	4
	10	9.841 2692	219	9.983 8680	422	0.016 1320	9.857 4012	203	50	
	20	9.841 2911	218	9.983 9102	421	0.016 0898	9.857 3809	203	40	
	30	9.841 3129	219	9.983 9523	421	0.016 0477	9.857 3606	202	30	
	40	9.841 3348	218	9.983 9944	422	0.016 0056	9.857 3404	203	20	
	50	9.841 3566	219	9.984 0366	421	0.015 9634	9.857 3201	203	10	
57	0	9.841 3785	218	9.984 0787	421	0.015 9213	9.857 2998	203	0	3
	10	9.841 4003	218	9.984 1208	422	0.015 8792	9.857 2795	203	50	
	20	9.841 4221	219	9.984 1630	421	0.015 8370	9.857 2592	203	40	
	30	9.841 4440	218	9.984 2051	422	0.015 7949	9.857 2389	203	30	
	40	9.841 4658	219	9.984 2473	421	0.015 7527	9.857 2186	204	20	
	50	9.841 4877	218	9.984 2894	421	0.015 7106	9.857 1982	203	10	
58	0	9.841 5095	218	9.984 3315	422	0.015 6685	9.857 1779	203	0	2
	10	9.841 5313	218	9.984 3737	421	0.015 6263	9.857 1576	203	50	
	20	9.841 5531	219	9.984 4158	422	0.015 5842	9.857 1373	203	40	
	30	9.841 5750	218	9.984 4580	421	0.015 5420	9.857 1170	203	30	
	40	9.841 5968	218	9.984 5001	421	0.015 4999	9.857 0967	203	20	
	50	9.841 6186	218	9.984 5422	422	0.015 4578	9.857 0764	203	10	
59	0	9.841 6404	218	9.984 5844	421	0.015 4156	9.857 0561	204	0	1
	10	9.841 6622	218	9.984 6265	421	0.015 3735	9.857 0357	203	50	
	20	9.841 6840	219	9.984 6686	422	0.015 3314	9.857 0154	203	40	
	30	9.841 7059	218	9.984 7108	421	0.015 2892	9.856 9951	203	30	
	40	9.841 7277	218	9.984 7529	421	0.015 2471	9.856 9748	204	20	
	50	9.841 7495	218	9.984 7950	422	0.015 2050	9.856 9544	203	10	
60	0	9.841 7713		9.984 8372		0.015 1628	9.856 9341		0	0
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

46°

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	421
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

	219
1	21.9
2	43.8
3	65.7
4	87.6
5	109.5
6	131.4
7	153.3
8	175.2
9	197.1

	218
1	21.8
2	43.6
3	65.4
4	87.2
5	109.0
6	130.8
7	152.6
8	174.4
9	196.2

	203
1	20.3
2	40.6
3	60.9
4	81.2
5	101.5
6	121.8
7	142.1
8	162.4
9	182.7

	204
1	20.4
2	40.8
3	61.2
4	81.6
5	102.0
6	122.4
7	142.8
8	163.2
9	183.6

44°

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

218	
1	21.8
2	43.6
3	65.4
4	87.2
5	109.0
6	130.8
7	152.6
8	174.4
9	196.2

217	
1	21.7
2	43.4
3	65.1
4	86.8
5	108.5
6	130.2
7	151.9
8	173.6
9	195.3

203	
1	20.3
2	40.6
3	60.9
4	81.2
5	101.5
6	121.8
7	142.1
8	162.4
9	182.7

204	
1	20.4
2	40.8
3	61.2
4	81.6
5	102.0
6	122.4
7	142.8
8	163.2
9	183 6

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
0	0	9.841 7713	218	9.984 8372	421	0.015 1628	9.856 9341	203	0	60
	10	9.841 7931	218	9.984 8793	422	0.015 1207	9.856 9138	204	50	
	20	9.841 8149	218	9.984 9215	421	0.015 0785	9.856 8934	203	40	
	30	9.841 8367	218	9.984 9636	421	0.015 0364	9.856 8731	204	30	
	40	9.841 8585	218	9.985 0057	422	0.014 9943	9.856 8527	203	20	
	50	9.841 8803	218	9.985 0479	421	0.014 9521	9.856 8324	203	10	
1	0	9.841 9021	217	9.985 0900	421	0.014 9100	9.856 8121	204	0	59
	10	9.841 9238	218	9.985 1321	422	0.014 8679	9.856 7917	203	50	
	20	9.841 9456	218	9.985 1743	421	0.014 8257	9.856 7714	204	40	
	30	9.841 9674	218	9.985 2164	421	0.014 7836	9.856 7510	203	30	
	40	9.841 9892	218	9.985 2585	422	0.014 7415	9.856 7307	204	20	
	50	9.842 0110	218	9.985 3007	421	0.014 6993	9.856 7103	203	10	
2	0	9.842 0328	217	9.985 3428	421	0.014 6572	9.856 6900	204	0	58
	10	9.842 0545	218	9.985 3849	422	0.014 6151	9.856 6696	204	50	
	20	9.842 0763	218	9.985 4271	421	0.014 5729	9.856 6492	203	40	
	30	9.842 0981	218	9.985 4692	421	0.014 5308	9.856 6289	204	30	
	40	9.842 1199	217	9.985 5113	422	0.014 4887	9.856 6085	204	20	
	50	9.842 1416	218	9.985 5535	421	0.014 4465	9.856 5881	203	10	
3	0	9.842 1634	218	9.985 5956	421	0.014 4044	9.856 5678	204	0	57
	10	9.842 1852	217	9.985 6377	422	0.014 3623	9.856 5474	204	50	
	20	9.842 2069	218	9.985 6799	421	0.014 3201	9.856 5270	203	40	
	30	9.842 2287	217	9.985 7220	421	0.014 2780	9.856 5067	204	30	
	40	9.842 2504	218	9.985 7641	422	0.014 2359	9.856 4863	204	20	
	50	9.842 2722	217	9.985 8063	421	0.014 1937	9.856 4659	204	10	
4	0	9.842 2939	218	9.985 8484	421	0.014 1516	9.856 4455	203	0	56
	10	9.842 3157	217	9.985 8905	422	0.014 1095	9.856 4252	204	50	
	20	9.842 3374	218	9.985 9327	421	0.014 0673	9.856 4048	204	40	
	30	9.842 3592	217	9.985 9748	421	0.014 0252	9.856 3844	204	30	
	40	9.842 3809	218	9.986 0169	422	0.013 9831	9.856 3640	204	20	
	50	9.842 4027	217	9.986 0591	421	0.013 9409	9.856 3436	204	10	
5	0	9.842 4244	218	9.986 1012	421	0.013 8988	9.856 3232	204	0	55
	10	9.842 4462	217	9.986 1433	422	0.013 8567	9.856 3028	204	50	
	20	9.842 4679	217	9.986 1855	421	0.013 8145	9.856 2824	204	40	
	30	9.842 4896	218	9.986 2276	421	0.013 7724	9.856 2620	204	30	
	40	9.842 5114	217	9.986 2697	422	0.013 7303	9.856 2416	204	20	
	50	9.842 5331	217	9.986 3119	421	0.013 6881	9.856 2212	204	10	
6	0	9.842 5548	217	9.986 3540	421	0.013 6460	9.856 2008	204	0	54
	10	9.842 5765	218	9.986 3961	422	0.013 6039	9.856 1804	204	50	
	20	9.842 5983	217	9.986 4383	421	0.013 5617	9.856 1600	204	40	
	30	9.842 6200	217	9.986 4804	421	0.013 5196	9.856 1396	204	30	
	40	9.842 6417	217	9.986 5225	421	0.013 4775	9.856 1192	204	20	
	50	9.842 6634	217	9.986 5646	422	0.013 4354	9.856 0988	204	10	
7	0	9.842 6851	218	9.986 6068	421	0.013 3932	9.856 0784	204	0	53
	10	9.842 7069	217	9.986 6489	421	0.013 3511	9.856 0580	205	50	
	20	9.842 7286	217	9.986 6910	422	0.013 3090	9.856 0375	204	40	
	30	9.842 7503	217	9.986 7332	421	0.013 2668	9.856 0171	204	30	
	40	9.842 7720	217	9.986 7753	421	0.013 2247	9.855 9967	204	20	
	50	9.842 7937	217	9.986 8174	422	0.013 1826	9.855 9763	205	10	
8	0	9.842 8154	217	9.986 8596	421	0.013 1404	9.855 9558	204	0	52
	10	9.842 8371	217	9.986 9017	421	0.013 0983	9.855 9354	204	50	
	20	9.842 8588	217	9.986 9438	421	0.013 0562	9.855 9150	205	40	
	30	9.842 8805	217	9.986 9859	422	0.013 0141	9.855 8945	204	30	
	40	9.842 9022	217	9.987 0281	421	0.012 9719	9.855 8741	204	20	
	50	9.842 9239	217	9.987 0702	421	0.012 9298	9.855 8537	205	10	
9	0	9.842 9456	217	9.987 1123	422	0.012 8877	9.855 8332	204	0	51
	10	9.842 9673	216	9.987 1545	421	0.012 8455	9.855 8128	204	50	
	20	9.842 9889	217	9.987 1966	421	0.012 8034	9.855 7924	205	40	
	30	9.843 0106	217	9.987 2387	421	0.012 7613	9.855 7719	204	30	
	40	9.843 0323	217	9.987 2808	422	0.012 7192	9.855 7515	205	20	
	50	9.843 0540	217	9.987 3230	421	0.012 6770	9.855 7310	204	10	
10	0	9.843 0757		9.987 3651		0.012 6349	9.855 7106		0	50
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

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44°

'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
10	0	9.843 0757	216	9.987 3651	421	0.012 6349	9.855 7106	205	0	50
	10	9.843 0973	217	9.987 4072	422	0.012 5928	9.855 6901	204	50	
	20	9.843 1190	217	9.987 4494	421	0.012 5506	9.855 6697	205	40	
	30	9.843 1407	217	9.987 4915	421	0.012 5085	9.855 6492	205	30	
	40	9.843 1624	216	9.987 5336	421	0.012 4664	9.855 6287	204	20	
	50	9.843 1840	217	9.987 5757	422	0.012 4243	9.855 6083	205	10	
11	0	9.843 2057	217	9.987 6179	421	0.012 3821	9.855 5878	204	0	49
	10	9.843 2274	216	9.987 6600	421	0.012 3400	9.855 5674	205	50	
	20	9.843 2490	217	9.987 7021	422	0.012 2979	9.855 5469	205	40	
	30	9.843 2707	216	9.987 7443	421	0.012 2557	9.855 5264	204	30	
	40	9.843 2923	217	9.987 7864	421	0.012 2136	9.855 5060	205	20	
	50	9.843 3140	216	9.987 8285	421	0.012 1715	9.855 4855	205	10	
12	0	9.843 3356	217	9.987 8706	422	0.012 1294	9.855 4650	205	0	48
	10	9.843 3573	216	9.987 9128	421	0.012 0872	9.855 4445	204	50	
	20	9.843 3789	217	9.987 9549	421	0.012 0451	9.855 4241	205	40	
	30	9.843 4006	216	9.987 9970	421	0.012 0030	9.855 4036	205	30	
	40	9.843 4222	217	9.988 0391	422	0.011 9609	9.855 3831	205	20	
	50	9.843 4439	216	9.988 0813	421	0.011 9187	9.855 3626	205	10	
13	0	9.843 4655	216	9.988 1234	421	0.011 8766	9.855 3421	205	0	47
	10	9.843 4871	217	9.988 1655	421	0.011 8345	9.855 3216	205	50	
	20	9.843 5088	216	9.988 2076	422	0.011 7924	9.855 3011	205	40	
	30	9.843 5304	217	9.988 2498	421	0.011 7502	9.855 2806	204	30	
	40	9.843 5521	216	9.988 2919	421	0.011 7081	9.855 2602	205	20	
	50	9.843 5737	216	9.988 3340	421	0.011 6660	9.855 2397	205	10	
14	0	9.843 5953	216	9.988 3761	422	0.011 6239	9.855 2192	205	0	46
	10	9.843 6169	217	9.988 4183	421	0.011 5817	9.855 1987	205	50	
	20	9.843 6386	216	9.988 4604	421	0.011 5396	9.855 1782	205	40	
	30	9.843 6602	216	9.988 5025	421	0.011 4975	9.855 1577	206	30	
	40	9.843 6818	216	9.988 5446	422	0.011 4554	9.855 1371	205	20	
	50	9.843 7034	216	9.988 5868	421	0.011 4132	9.855 1166	205	10	
15	0	9.843 7250	216	9.988 6289	421	0.011 3711	9.855 0961	205	0	45
	10	9.843 7466	217	9.988 6710	421	0.011 3290	9.855 0756	205	50	
	20	9.843 7683	216	9.988 7131	422	0.011 2869	9.855 0551	205	40	
	30	9.843 7899	216	9.988 7553	421	0.011 2447	9.855 0346	205	30	
	40	9.843 8115	216	9.988 7974	421	0.011 2026	9.855 0141	206	20	
	50	9.843 8331	216	9.988 8395	421	0.011 1605	9.854 9935	205	10	
16	0	9.843 8547	216	9.988 8816	422	0.011 1184	9.854 9730	205	0	44
	10	9.843 8763	216	9.988 9238	421	0.011 0762	9.854 9525	205	50	
	20	9.843 8979	216	9.988 9659	421	0.011 0341	9.854 9320	206	40	
	30	9.843 9195	216	9.989 0080	421	0.010 9920	9.854 9114	205	30	
	40	9.843 9411	216	9.989 0501	422	0.010 9499	9.854 8909	205	20	
	50	9.843 9627	215	9.989 0923	421	0.010 9077	9.854 8704	205	10	
17	0	9.843 9842	216	9.989 1344	421	0.010 8656	9.854 8499	206	0	43
	10	9.844 0058	216	9.989 1765	421	0.010 8235	9.854 8293	205	50	
	20	9.844 0274	216	9.989 2186	422	0.010 7814	9.854 8088	206	40	
	30	9.844 0490	216	9.989 2608	421	0.010 7392	9.854 7882	205	30	
	40	9.844 0706	216	9.989 3029	421	0.010 6971	9.854 7677	205	20	
	50	9.844 0922	215	9.989 3450	421	0.010 6550	9.854 7472	206	10	
18	0	9.844 1137	216	9.989 3871	422	0.010 6129	9.854 7266	205	0	42
	10	9.844 1353	216	9.989 4293	421	0.010 5707	9.854 7061	206	50	
	20	9.844 1569	216	9.989 4714	421	0.010 5286	9.854 6855	205	40	
	30	9.844 1785	215	9.989 5135	421	0.010 4865	9.854 6650	206	30	
	40	9.844 2000	216	9.989 5556	421	0.010 4444	9.854 6444	206	20	
	50	9.844 2216	216	9.989 5977	422	0.010 4023	9.854 6238	205	10	
19	0	9.844 2432	215	9.989 6399	421	0.010 3601	9.854 6033	206	0	41
	10	9.844 2647	216	9.989 6820	421	0.010 3180	9.854 5827	205	50	
	20	9.844 2863	215	9.989 7241	421	0.010 2759	9.854 5622	206	40	
	30	9.844 3078	216	9.989 7662	422	0.010 2338	9.854 5416	206	30	
	40	9.844 3294	215	9.989 8084	421	0.010 1916	9.854 5210	205	20	
	50	9.844 3509	216	9.989 8505	421	0.010 1495	9.854 5005	206	10	
20	0	9.844 3725		9.989 8926		0.010 1074	9.854 4799		0	40
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

45°

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	421
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

	216
1	21.6
2	43.2
3	64.8
4	86.4
5	108.0
6	129.6
7	151.2
8	172.8
9	194.4

	215
1	21.5
2	43.0
3	64.5
4	86.0
5	107.5
6	129.0
7	150.5
8	172.0
9	193.5

	205
1	20.5
2	41.0
3	61.5
4	82.0
5	102.5
6	123.0
7	143.5
8	164.0
9	184.5

	206
1	20.6
2	41.2
3	61.8
4	82.4
5	103.0
6	123.6
7	144.2
8	164.8
9	185.4

44°

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

216	
1	21.6
2	43.2
3	64.8
4	86.4
5	108.0
6	129.6
7	151.2
8	172.8
9	194.4

215	
1	21.5
2	43.0
3	64.5
4	86.0
5	107.5
6	129.0
7	150.5
8	172.0
9	193.5

205	
1	20.5
2	41.0
3	61.5
4	82.0
5	102.5
6	123.0
7	143.5
8	164.0
9	184.5

206	
1	20.6
2	41.2
3	61.8
4	82.4
5	103.0
6	123.6
7	144.2
8	164.8
9	185.4

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
20	0	9.844 3725	215	9.989 8926	421	0.010 1074	9.854 4799	206	0	40
	10	9.844 3940	216	9.989 9347	421	0.010 0653	9.854 4593	205	50	
	20	9.844 4156	215	9.989 9768	422	0.010 0232	9.854 4388	206	40	
	30	9.844 4371	216	9.990 0190	421	0.009 9810	9.854 4182	206	30	
	40	9.844 4587	215	9.990 0611	421	0.009 9389	9.854 3976	206	20	
	50	9.844 4802	216	9.990 1032	421	0.009 8968	9.854 3770	206	10	
21	0	9.844 5018	215	9.990 1453	421	0.009 8547	9.854 3564	205	0	39
	10	9.844 5233	215	9.990 1874	422	0.009 8126	9.854 3359	206	50	
	20	9.844 5448	216	9.990 2296	421	0.009 7704	9.854 3153	206	40	
	30	9.844 5664	215	9.990 2717	421	0.009 7283	9.854 2947	206	30	
	40	9.844 5879	215	9.990 3138	421	0.009 6862	9.854 2741	206	20	
	50	9.844 6094	216	9.990 3559	422	0.009 6441	9.854 2535	206	10	
22	0	9.844 6310	215	9.990 3981	421	0.009 6019	9.854 2329	206	0	38
	10	9.844 6525	215	9.990 4402	421	0.009 5598	9.854 2123	206	50	
	20	9.844 6740	215	9.990 4823	421	0.009 5177	9.854 1917	206	40	
	30	9.844 6955	215	9.990 5244	421	0.009 4756	9.854 1711	206	30	
	40	9.844 7170	216	9.990 5665	422	0.009 4335	9.854 1505	206	20	
	50	9.844 7386	215	9.990 6087	421	0.009 3913	9.854 1299	206	10	
23	0	9.844 7601	215	9.990 6508	421	0.009 3492	9.854 1093	206	0	37
	10	9.844 7816	215	9.990 6929	421	0.009 3071	9.854 0887	206	50	
	20	9.844 8031	215	9.990 7350	421	0.009 2650	9.854 0681	206	40	
	30	9.844 8246	215	9.990 7771	422	0.009 2229	9.854 0475	206	30	
	40	9.844 8461	215	9.990 8193	421	0.009 1807	9.854 0269	207	20	
	50	9.844 8676	215	9.990 8614	421	0.009 1386	9.854 0062	206	10	
24	0	9.844 8891	215	9.990 9035	421	0.009 0965	9.853 9856	206	0	36
	10	9.844 9106	215	9.990 9456	421	0.009 0544	9.853 9650	206	50	
	20	9.844 9321	215	9.990 9877	422	0.009 0123	9.853 9444	206	40	
	30	9.844 9536	215	9.991 0299	421	0.008 9701	9.853 9238	207	30	
	40	9.844 9751	215	9.991 0720	421	0.008 9280	9.853 9031	206	20	
	50	9.844 9966	215	9.991 1141	421	0.008 8859	9.853 8825	206	10	
25	0	9.845 0181	215	9.991 1562	421	0.008 8438	9.853 8619	207	0	35
	10	9.845 0396	215	9.991 1983	421	0.008 8017	9.853 8412	206	50	
	20	9.845 0611	214	9.991 2404	422	0.008 7596	9.853 8206	206	40	
	30	9.845 0825	215	9.991 2826	421	0.008 7174	9.853 8000	207	30	
	40	9.845 1040	215	9.991 3247	421	0.008 6753	9.853 7793	206	20	
	50	9.845 1255	215	9.991 3668	421	0.008 6332	9.853 7587	206	10	
26	0	9.845 1470	215	9.991 4089	421	0.008 5911	9.853 7381	207	0	34
	10	9.845 1685	214	9.991 4510	422	0.008 5490	9.853 7174	206	50	
	20	9.845 1899	215	9.991 4932	421	0.008 5068	9.853 6968	207	40	
	30	9.845 2114	215	9.991 5353	421	0.008 4647	9.853 6761	206	30	
	40	9.845 2329	214	9.991 5774	421	0.008 4226	9.853 6555	207	20	
	50	9.845 2543	215	9.991 6195	421	0.008 3805	9.853 6348	206	10	
27	0	9.845 2758	215	9.991 6616	422	0.008 3384	9.853 6142	207	0	33
	10	9.845 2973	214	9.991 7038	421	0.008 2962	9.853 5935	206	50	
	20	9.845 3187	215	9.991 7459	421	0.008 2541	9.853 5729	207	40	
	30	9.845 3402	214	9.991 7880	421	0.008 2120	9.853 5522	207	30	
	40	9.845 3616	215	9.991 8301	421	0.008 1699	9.853 5315	206	20	
	50	9.845 3831	214	9.991 8722	421	0.008 1278	9.853 5109	207	10	
28	0	9.845 4045	215	9.991 9143	422	0.008 0857	9.853 4902	207	0	32
	10	9.845 4260	214	9.991 9565	421	0.008 0435	9.853 4695	206	50	
	20	9.845 4474	215	9.991 9986	421	0.008 0014	9.853 4489	207	40	
	30	9.845 4689	214	9.992 0407	421	0.007 9593	9.853 4282	207	30	
	40	9.845 4903	215	9.992 0828	421	0.007 9172	9.853 4075	207	20	
	50	9.845 5118	214	9.992 1249	421	0.007 8751	9.853 3868	206	10	
29	0	9.845 5332	214	9.992 1670	422	0.007 8330	9.853 3662	207	0	31
	10	9.845 5546	215	9.992 2092	421	0.007 7908	9.853 3455	207	50	
	20	9.845 5761	214	9.992 2513	421	0.007 7487	9.853 3248	207	40	
	30	9.845 5975	214	9.992 2934	421	0.007 7066	9.853 3041	207	30	
	40	9.845 6189	215	9.992 3355	421	0.007 6645	9.853 2834	207	20	
	50	9.845 6404	214	9.992 3776	421	0.007 6224	9.853 2627	206	10	
30	0	9.845 6618		9.992 4197		0.007 5803	9.853 2421		0	30
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

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'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
30	0	9.845 6618	214	9.992 4197	422	0.007 5803	9.853 2421	207	0	30
	10	9.845 6832	214	9.992 4619	421	0.007 5381	9.853 2214	207	50	
	20	9.845 7046	215	9.992 5040	421	0.007 4960	9.853 2007	207	40	
	30	9.845 7261	214	9.992 5461	421	0.007 4539	9.853 1800	207	30	
	40	9.845 7475	214	9.992 5882	421	0.007 4118	9.853 1593	207	20	
	50	9.845 7689	214	9.992 6303	421	0.007 3697	9.853 1386	207	10	
31	0	9.845 7903	214	9.992 6724	422	0.007 3276	9.853 1179	207	0	29
	10	9.845 8117	214	9.992 7146	421	0.007 2854	9.853 0972	207	50	
	20	9.845 8331	214	9.992 7567	421	0.007 2433	9.853 0765	207	40	
	30	9.845 8545	215	9.992 7988	421	0.007 2012	9.853 0558	208	30	
	40	9.845 8760	214	9.992 8409	421	0.007 1591	9.853 0350	207	20	
	50	9.845 8974	214	9.992 8830	421	0.007 1170	9.853 0143	207	10	
32	0	9.845 9188	214	9.992 9251	422	0.007 0749	9.852 9936	207	0	28
	10	9.845 9402	214	9.992 9673	421	0.007 0327	9.852 9729	207	50	
	20	9.845 9616	214	9.993 0094	421	0.006 9906	9.852 9522	207	40	
	30	9.845 9830	213	9.993 0515	421	0.006 9485	9.852 9315	208	30	
	40	9.846 0043	214	9.993 0936	421	0.006 9064	9.852 9107	207	20	
	50	9.846 0257	214	9.993 1357	421	0.006 8643	9.852 8900	207	10	
33	0	9.846 0471	214	9.993 1778	422	0.006 8222	9.852 8693	207	0	27
	10	9.846 0685	214	9.993 2200	421	0.006 7800	9.852 8486	208	50	
	20	9.846 0899	214	9.993 2621	421	0.006 7379	9.852 8278	207	40	
	30	9.846 1113	214	9.993 3042	421	0.006 6958	9.852 8071	207	30	
	40	9.846 1327	213	9.993 3463	421	0.006 6537	9.852 7864	208	20	
	50	9.846 1540	214	9.993 3884	421	0.006 6116	9.852 7656	207	10	
34	0	9.846 1754	214	9.993 4305	421	0.006 5695	9.852 7449	207	0	26
	10	9.846 1968	214	9.993 4726	422	0.006 5274	9.852 7242	208	50	
	20	9.846 2182	213	9.993 5148	421	0.006 4852	9.852 7034	207	40	
	30	9.846 2395	214	9.993 5569	421	0.006 4431	9.852 6827	208	30	
	40	9.846 2609	214	9.993 5990	421	0.006 4010	9.852 6619	207	20	
	50	9.846 2823	213	9.993 6411	421	0.006 3589	9.852 6412	208	10	
35	0	9.846 3036	214	9.993 6832	421	0.006 3168	9.852 6204	207	0	25
	10	9.846 3250	214	9.993 7253	421	0.006 2747	9.852 5997	208	50	
	20	9.846 3464	213	9.993 7674	422	0.006 2326	9.852 5789	207	40	
	30	9.846 3677	214	9.993 8096	421	0.006 1904	9.852 5582	208	30	
	40	9.846 3891	213	9.993 8517	421	0.006 1483	9.852 5374	208	20	
	50	9.846 4104	214	9.993 8938	421	0.006 1062	9.852 5166	207	10	
36	0	9.846 4318	213	9.993 9359	421	0.006 0641	9.852 4959	208	0	24
	10	9.846 4531	214	9.993 9780	421	0.006 0220	9.852 4751	208	50	
	20	9.846 4745	213	9.994 0201	422	0.005 9799	9.852 4543	207	40	
	30	9.846 4958	214	9.994 0623	421	0.005 9377	9.852 4336	208	30	
	40	9.846 5172	213	9.994 1044	421	0.005 8956	9.852 4128	208	20	
	50	9.846 5385	214	9.994 1465	421	0.005 8535	9.852 3920	207	10	
37	0	9.846 5599	213	9.994 1886	421	0.005 8114	9.852 3713	208	0	23
	10	9.846 5812	213	9.994 2307	421	0.005 7693	9.852 3505	208	50	
	20	9.846 6025	214	9.994 2728	421	0.005 7272	9.852 3297	208	40	
	30	9.846 6239	213	9.994 3149	422	0.005 6851	9.852 3089	208	30	
	40	9.846 6452	213	9.994 3571	421	0.005 6429	9.852 2881	207	20	
	50	9.846 6665	214	9.994 3992	421	0.005 6008	9.852 2674	208	10	
38	0	9.846 6879	213	9.994 4413	421	0.005 5587	9.852 2466	208	0	22
	10	9.846 7092	213	9.994 4834	421	0.005 5166	9.852 2258	208	50	
	20	9.846 7305	213	9.994 5255	421	0.005 4745	9.852 2050	208	40	
	30	9.846 7518	213	9.994 5676	421	0.005 4324	9.852 1842	208	30	
	40	9.846 7731	214	9.994 6097	421	0.005 3903	9.852 1634	208	20	
	50	9.846 7945	213	9.994 6518	422	0.005 3482	9.852 1426	208	10	
39	0	9.846 8158	213	9.994 6940	421	0.005 3060	9.852 1218	208	0	21
	10	9.846 8371	213	9.994 7361	421	0.005 2639	9.852 1010	208	50	
	20	9.846 8584	213	9.994 7782	421	0.005 2218	9.852 0802	208	40	
	30	9.846 8797	213	9.994 8203	421	0.005 1797	9.852 0594	208	30	
	40	9.846 9010	213	9.994 8624	421	0.005 1376	9.852 0386	208	20	
	50	9.846 9223	213	9.994 9045	421	0.005 0955	9.852 0178	208	10	
40	0	9.846 9436		9.994 9466		0.005 0534	9.851 9970		0	20
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

214	
1	21.4
2	42.8
3	64.2
4	85.6
5	107.0
6	128.4
7	149.8
8	171.2
9	192.6

213	
1	21.3
2	42.6
3	63.9
4	85.2
5	106.5
6	127.8
7	149.1
8	170.4
9	191.7

207	
1	20.7
2	41.4
3	62.1
4	82.8
5	103.5
6	124.2
7	144.9
8	165.6
9	186.3

208	
1	20.8
2	41.6
3	62.4
4	83.2
5	104.0
6	124.8
7	145.6
8	166.4
9	187.2

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422	
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

421	
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

213	
1	21.3
2	42.6
3	63.9
4	85.2
5	106.5
6	127.8
7	149.1
8	170.4
9	191.7

212	
1	21.2
2	42.4
3	63.6
4	84.8
5	106.0
6	127.2
7	148.4
8	169.6
9	190.8

208	
1	20.8
2	41.6
3	62.4
4	83.2
5	104.0
6	124.8
7	145.6
8	166.4
9	187.2

209	
1	20.9
2	41.8
3	62.7
4	83.6
5	104.5
6	125.4
7	146.3
8	167.2
9	188.1

′	″	Sin	d.	Tang	d. c.	Cotg	Cos	d.	″	′
40	0	9.846 9436	213	9.994 9466	422	0.005 0534	9.851 9970	208	0	20
	10	9.846 9649	213	9.994 9888	421	0.005 0112	9.851 9762	208	50	
	20	9.846 9862	213	9.995 0309	421	0.004 9691	9.851 9554	209	40	
	30	9.847 0075	213	9.995 0730	421	0.004 9270	9.851 9345	208	30	
	40	9.847 0288	213	9.995 1151	421	0.004 8849	9.851 9137	208	20	
	50	9.847 0501	213	9.995 1572	421	0.004 8428	9.851 8929	208	10	
41	0	9.847 0714	213	9.995 1993	421	0.004 8007	9.851 8721	208	0	19
	10	9.847 0927	213	9.995 2414	421	0.004 7586	9.851 8513	209	50	
	20	9.847 1140	213	9.995 2835	422	0.004 7165	9.851 8304	208	40	
	30	9.847 1353	212	9.995 3257	421	0.004 6743	9.851 8096	208	30	
	40	9.847 1565	213	9.995 3678	421	0.004 6322	9.851 7888	209	20	
	50	9.847 1778	213	9.995 4099	421	0.004 5901	9.851 7679	208	10	
42	0	9.847 1991	213	9.995 4520	421	0.004 5480	9.851 7471	208	0	18
	10	9.847 2204	212	9.995 4941	421	0.004 5059	9.851 7263	209	50	
	20	9.847 2416	213	9.995 5362	421	0.004 4638	9.851 7054	208	40	
	30	9.847 2629	213	9.995 5783	421	0.004 4217	9.851 6846	209	30	
	40	9.847 2842	213	9.995 6204	422	0.004 3796	9.851 6637	208	20	
	50	9.847 3055	212	9.995 6626	421	0.004 3374	9.851 6429	209	10	
43	0	9.847 3267	213	9.995 7047	421	0.004 2953	9.851 6220	208	0	17
	10	9.847 3480	212	9.995 7468	421	0.004 2532	9.851 6012	209	50	
	20	9.847 3692	213	9.995 7889	421	0.004 2111	9.851 5803	208	40	
	30	9.847 3905	213	9.995 8310	421	0.004 1690	9.851 5595	209	30	
	40	9.847 4118	212	9.995 8731	421	0.004 1269	9.851 5386	208	20	
	50	9.847 4330	213	9.995 9152	421	0.004 0848	9.851 5178	209	10	
44	0	9.847 4543	212	9.995 9573	422	0.004 0427	9.851 4969	208	0	16
	10	9.847 4755	213	9.995 9995	421	0.004 0005	9.851 4761	209	50	
	20	9.847 4968	212	9.996 0416	421	0.003 9584	9.851 4552	209	40	
	30	9.847 5180	213	9.996 0837	421	0.003 9163	9.851 4343	208	30	
	40	9.847 5393	212	9.996 1258	421	0.003 8742	9.851 4135	209	20	
	50	9.847 5605	212	9.996 1679	421	0.003 8321	9.851 3926	209	10	
45	0	9.847 5817	213	9.996 2100	421	0.003 7900	9.851 3717	208	0	15
	10	9.847 6030	212	9.996 2521	421	0.003 7479	9.851 3509	209	50	
	20	9.847 6242	213	9.996 2942	422	0.003 7058	9.851 3300	209	40	
	30	9.847 6455	212	9.996 3364	421	0.003 6636	9.851 3091	209	30	
	40	9.847 6667	212	9.996 3785	421	0.003 6215	9.851 2882	209	20	
	50	9.847 6879	212	9.996 4206	421	0.003 5794	9.851 2673	208	10	
46	0	9.847 7091	213	9.996 4627	421	0.003 5373	9.851 2465	209	0	14
	10	9.847 7304	212	9.996 5048	421	0.003 4952	9.851 2256	209	50	
	20	9.847 7516	212	9.996 5469	421	0.003 4531	9.851 2047	209	40	
	30	9.847 7728	212	9.996 5890	421	0.003 4110	9.851 1838	209	30	
	40	9.847 7940	213	9.996 6311	421	0.003 3689	9.851 1629	209	20	
	50	9.847 8153	212	9.996 6732	422	0.003 3268	9.851 1420	209	10	
47	0	9.847 8365	212	9.996 7154	421	0.003 2846	9.851 1211	209	0	13
	10	9.847 8577	212	9.996 7575	421	0.003 2425	9.851 1002	209	50	
	20	9.847 8789	212	9.996 7996	421	0.003 2004	9.851 0793	209	40	
	30	9.847 9001	212	9.996 8417	421	0.003 1583	9.851 0584	209	30	
	40	9.847 9213	212	9.996 8838	421	0.003 1162	9.851 0375	209	20	
	50	9.847 9425	212	9.996 9259	421	0.003 0741	9.851 0166	209	10	
48	0	9.847 9637	212	9.996 9680	421	0.003 0320	9.850 9957	209	0	12
	10	9.847 9849	212	9.997 0101	422	0.002 9899	9.850 9748	209	50	
	20	9.848 0061	212	9.997 0523	421	0.002 9477	9.850 9539	209	40	
	30	9.848 0273	212	9.997 0944	421	0.002 9056	9.850 9330	210	30	
	40	9.848 0485	212	9.997 1365	421	0.002 8635	9.850 9120	209	20	
	50	9.848 0697	212	9.997 1786	421	0.002 8214	9.850 8911	209	10	
49	0	9.848 0909	212	9.997 2207	421	0.002 7793	9.850 8702	209	0	11
	10	9.848 1121	212	9.997 2628	421	0.002 7372	9.850 8493	209	50	
	20	9.848 1333	212	9.997 3049	421	0.002 6951	9.850 8284	210	40	
	30	9.848 1545	211	9.997 3470	421	0.002 6530	9.850 8074	209	30	
	40	9.848 1756	212	9.997 3891	422	0.002 6109	9.850 7865	209	20	
	50	9.848 1968	212	9.997 4313	421	0.002 5687	9.850 7656	210	10	
50	0	9.848 2180		9.997 4734		0.002 5266	9.850 7446		0	10
′	″	Cos	d.	Cotg	d. c.	Tang	Sin	d.	″	′

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'	"	Sin	d.	Tang	d. c.	Cotg	Cos	d.	"	'
50	0	9.848 2180	212	9.997 4734	421	0.002 5266	9.850 7446	209	0	10
	10	9.848 2392	212	9.997 5155	421	0.002 4845	9.850 7237	209	50	
	20	9.848 2604	211	9.997 5576	421	0.002 4424	9.850 7028	210	40	
	30	9.848 2815	212	9.997 5997	421	0.002 4003	9.850 6818	209	30	
	40	9.848 3027	212	9.997 6418	421	0.002 3582	9.850 6609	209	20	
	50	9.848 3239	211	9.997 6839	421	0.002 3161	9.850 6400	210	10	
51	0	9.848 3450	212	9.997 7260	421	0.002 2740	9.850 6190	209	0	9
	10	9.848 3662	212	9.997 7681	422	0.002 2319	9.850 5981	210	50	
	20	9.848 3874	211	9.997 8103	421	0.002 1897	9.850 5771	209	40	
	30	9.848 4085	212	9.997 8524	421	0.002 1476	9.850 5562	210	30	
	40	9.848 4297	211	9.997 8945	421	0.002 1055	9.850 5352	209	20	
	50	9.848 4508	212	9.997 9366	421	0.002 0634	9.850 5143	210	10	
52	0	9.848 4720	211	9.997 9787	421	0.002 0213	9.850 4933	210	0	8
	10	9.848 4931	212	9.998 0208	421	0.001 9792	9.850 4723	209	50	
	20	9.848 5143	211	9.998 0629	421	0.001 9371	9.850 4514	210	40	
	30	9.848 5354	212	9.998 1050	421	0.001 8950	9.850 4304	209	30	
	40	9.848 5566	211	9.998 1471	421	0.001 8529	9.850 4095	210	20	
	50	9.848 5777	212	9.998 1892	422	0.001 8108	9.850 3885	210	10	
53	0	9.848 5989	211	9.998 2314	421	0.001 7686	9.850 3675	209	0	7
	10	9.848 6200	212	9.998 2735	421	0.001 7265	9.850 3466	210	50	
	20	9.848 6412	211	9.998 3156	421	0.001 6844	9.850 3256	210	40	
	30	9.848 6623	211	9.998 3577	421	0.001 6423	9.850 3046	210	30	
	40	9.848 6834	212	9.998 3998	421	0.001 6002	9.850 2836	210	20	
	50	9.848 7046	211	9.998 4419	421	0.001 5581	9.850 2626	209	10	
54	0	9.848 7257	211	9.998 4840	421	0.001 5160	9.850 2417	210	0	6
	10	9.848 7468	211	9.998 5261	421	0.001 4739	9.850 2207	210	50	
	20	9.848 7679	212	9.998 5682	422	0.001 4318	9.850 1997	210	40	
	30	9.848 7891	211	9.998 6104	421	0.001 3896	9.850 1787	210	30	
	40	9.848 8102	211	9.998 6525	421	0.001 3475	9.850 1577	210	20	
	50	9.848 8313	211	9.998 6946	421	0.001 3054	9.850 1367	210	10	
55	0	9.848 8524	211	9.998 7367	421	0.001 2633	9.850 1157	210	0	5
	10	9.848 8735	212	9.998 7788	421	0.001 2212	9.850 0947	210	50	
	20	9.848 8947	211	9.998 8209	421	0.001 1791	9.850 0737	210	40	
	30	9.848 9158	211	9.998 8630	421	0.001 1370	9.850 0527	210	30	
	40	9.848 9369	211	9.998 9051	421	0.001 0949	9.850 0317	210	20	
	50	9.848 9580	211	9.998 9472	421	0.001 0528	9.850 0107	210	10	
56	0	9.848 9791	211	9.998 9893	422	0.001 0107	9.849 9897	210	0	4
	10	9.849 0002	211	9.999 0315	421	0.000 9685	9.849 9687	210	50	
	20	9.849 0213	211	9.999 0736	421	0.000 9264	9.849 9477	210	40	
	30	9.849 0424	211	9.999 1157	421	0.000 8843	9.849 9267	210	30	
	40	9.849 0635	211	9.999 1578	421	0.000 8422	9.849 9057	210	20	
	50	9.849 0846	211	9.999 1999	421	0.000 8001	9.849 8847	210	10	
57	0	9.849 1057	211	9.999 2420	421	0.000 7580	9.849 8637	211	0	3
	10	9.849 1268	211	9.999 2841	421	0.000 7159	9.849 8426	210	50	
	20	9.849 1479	210	9.999 3262	421	0.000 6738	9.849 8216	210	40	
	30	9.849 1689	211	9.999 3683	422	0.000 6317	9.849 8006	210	30	
	40	9.849 1900	211	9.999 4105	421	0.000 5895	9.849 7796	211	20	
	50	9.849 2111	211	9.999 4526	421	0.000 5474	9.849 7585	210	10	
58	0	9.849 2322	211	9.999 4947	421	0.000 5053	9.849 7375	210	0	2
	10	9.849 2533	210	9.999 5368	421	0.000 4632	9.849 7165	210	50	
	20	9.849 2743	211	9.999 5789	421	0.000 4211	9.849 6955	211	40	
	30	9.849 2954	211	9.999 6210	421	0.000 3790	9.849 6744	210	30	
	40	9.849 3165	211	9.999 6631	421	0.000 3369	9.849 6534	211	20	
	50	9.849 3376	210	9.999 7052	421	0.000 2948	9.849 6323	210	10	
59	0	9.849 3586	211	9.999 7473	421	0.000 2527	9.849 6113	210	0	1
	10	9.849 3797	211	9.999 7894	422	0.000 2106	9.849 5903	211	50	
	20	9.849 4008	210	9.999 8316	421	0.000 1684	9.849 5692	210	40	
	30	9.849 4218	211	9.999 8737	421	0.000 1263	9.849 5482	211	30	
	40	9.849 4429	210	9.999 9158	421	0.000 0842	9.849 5271	210	20	
	50	9.849 4639	211	9.999 9579	421	0.000 0421	9.849 5061	211	10	
60	0	9.849 4850		0.000 0000		0.000 0000	9.849 4850		0	0
'	"	Cos	d.	Cotg	d. c.	Tang	Sin	d.	"	'

45°

	422
1	42.2
2	84.4
3	126.6
4	168.8
5	211.0
6	253.2
7	295.4
8	337.6
9	379.8

	421
1	42.1
2	84.2
3	126.3
4	168.4
5	210.5
6	252.6
7	294.7
8	336.8
9	378.9

	212
1	21.2
2	42.4
3	63.6
4	84.8
5	106.0
6	127.2
7	148.4
8	169.6
9	190.8

	211
1	21.1
2	42.2
3	63.3
4	84.4
5	105.5
6	126.6
7	147.7
8	168.8
9	189.9

	210
1	21.0
2	42.0
3	63.0
4	84.0
5	105.0
6	126.0
7	147.0
8	168.0
9	189.0

	209
1	20.9
2	41.8
3	62.7
4	83.6
5	104.5
6	125.4
7	146.3
8	167.2
9	188.1

DEGREES.												MI-NUTES.		SE-CONDS.	
° 0	h m 0 0	° 60	h m 4 0	° 120	h m 8 0	° 180	h m 12 0	° 240	h m 16 0	° 300	h m 20 0	′ 0	m s 0 0	″ 0	s 0.00
1	0 4	61	4 4	121	8 4	181	12 4	241	16 4	301	20 4	1	0 4	1	0.07
2	0 8	62	4 8	122	8 8	182	12 8	242	16 8	302	20 8	2	0 8	2	0.13
3	0 12	63	4 12	123	8 12	183	12 12	243	16 12	303	20 12	3	0 12	3	0.20
4	0 16	64	4 16	124	8 16	184	12 16	244	16 16	304	20 16	4	0 16	4	0.27
5	0 20	65	4 20	125	8 20	185	12 20	245	16 20	305	20 20	5	0 20	5	0.33
6	0 24	66	4 24	126	8 24	186	12 24	246	16 24	306	20 24	6	0 24	6	0.40
7	0 28	67	4 28	127	8 28	187	12 28	247	16 28	307	20 28	7	0 28	7	0.47
8	0 32	68	4 32	128	8 32	188	12 32	248	16 32	308	20 32	8	0 32	8	0.53
9	0 36	69	4 36	129	8 36	189	12 36	249	16 36	309	20 36	9	0 36	9	0.60
10	0 40	70	4 40	130	8 40	190	12 40	250	16 40	310	20 40	10	0 40	10	0.67
11	0 44	71	4 44	131	8 44	191	12 44	251	16 44	311	20 44	11	0 44	11	0.73
12	0 48	72	4 48	132	8 48	192	12 48	252	16 48	312	20 48	12	0 48	12	0.80
13	0 52	73	4 52	133	8 52	193	12 52	253	16 52	313	20 52	13	0 52	13	0.87
14	0 56	74	4 56	134	8 56	194	12 56	254	16 56	314	20 56	14	0 56	14	0.93
15	1 0	75	5 0	135	9 0	195	13 0	255	17 0	315	21 0	15	1 0	15	1.00
16	1 4	76	5 4	136	9 4	196	13 4	256	17 4	316	21 4	16	1 4	16	1.07
17	1 8	77	5 8	137	9 8	197	13 8	257	17 8	317	21 8	17	1 8	17	1.13
18	1 12	78	5 12	138	9 12	198	13 12	258	17 12	318	21 12	18	1 12	18	1.20
19	1 16	79	5 16	139	9 16	199	13 16	259	17 16	319	21 16	19	1 16	19	1.27
20	1 20	80	5 20	140	9 20	200	13 20	260	17 20	320	21 20	20	1 20	20	1.33
21	1 24	81	5 24	141	9 24	201	13 24	261	17 24	321	21 24	21	1 24	21	1.40
22	1 28	82	5 28	142	9 28	202	13 28	262	17 28	322	21 28	22	1 28	22	1.47
23	1 32	83	5 32	143	9 32	203	13 32	263	17 32	323	21 32	23	1 32	23	1.53
24	1 36	84	5 36	144	9 36	204	13 36	264	17 36	324	21 36	24	1 36	24	1.60
25	1 40	85	5 40	145	9 40	205	13 40	265	17 40	325	21 40	25	1 40	25	1.67
26	1 44	86	5 44	146	9 44	206	13 44	266	17 44	326	21 44	26	1 44	26	1.73
27	1 48	87	5 48	147	9 48	207	13 48	267	17 48	327	21 48	27	1 48	27	1.80
28	1 52	88	5 52	148	9 52	208	13 52	268	17 52	328	21 52	28	1 52	28	1.87
29	1 56	89	5 56	149	9 56	209	13 56	269	17 56	329	21 56	29	1 56	29	1.93
30	2 0	90	6 0	150	10 0	210	14 0	270	18 0	330	22 0	30	2 0	30	2.00
31	2 4	91	6 4	151	10 4	211	14 4	271	18 4	331	22 4	31	2 4	31	2.07
32	2 8	92	6 8	152	10 8	212	14 8	272	18 8	332	22 8	32	2 8	32	2.13
33	2 12	93	6 12	153	10 12	213	14 12	273	18 12	333	22 12	33	2 12	33	2.20
34	2 16	94	6 16	154	10 16	214	14 16	274	18 16	334	22 16	34	2 16	34	2.27
35	2 20	95	6 20	155	10 20	215	14 20	275	18 20	335	22 20	35	2 20	35	2.33
36	2 24	96	6 24	156	10 24	216	14 24	276	18 24	336	22 24	36	2 24	36	2.40
37	2 28	97	6 28	157	10 28	217	14 28	277	18 28	337	22 28	37	2 28	37	2.47
38	2 32	98	6 32	158	10 32	218	14 32	278	18 32	338	22 32	38	2 32	38	2.53
39	2 36	99	6 36	159	10 36	219	14 36	279	18 36	339	22 36	39	2 36	39	2.60
40	2 40	100	6 40	160	10 40	220	14 40	280	18 40	340	22 40	40	2 40	40	2.67
41	2 44	101	6 44	161	10 44	221	14 44	281	18 44	341	22 44	41	2 44	41	2.73
42	2 48	102	6 48	162	10 48	222	14 48	282	18 48	342	22 48	42	2 48	42	2.80
43	2 52	103	6 52	163	10 52	223	14 52	283	18 52	343	22 52	43	2 52	43	2.87
44	2 56	104	6 56	164	10 56	224	14 56	284	18 56	344	22 56	44	2 56	44	2.93
45	3 0	105	7 0	165	11 0	225	15 0	285	19 0	345	23 0	45	3 0	45	3.00
46	3 4	106	7 4	166	11 4	226	15 4	286	19 4	346	23 4	46	3 4	46	3.07
47	3 8	107	7 8	167	11 8	227	15 8	287	19 8	347	23 8	47	3 8	47	3.13
48	3 12	108	7 12	168	11 12	228	15 12	288	19 12	348	23 12	48	3 12	48	3.20
49	3 16	109	7 16	169	11 16	229	15 16	289	19 16	349	23 16	49	3 16	49	3.27
50	3 20	110	7 20	170	11 20	230	15 20	290	19 20	350	23 20	50	3 20	50	3.33
51	3 24	111	7 24	171	11 24	231	15 24	291	19 24	351	23 24	51	3 24	51	3.40
52	3 28	112	7 28	172	11 28	232	15 28	292	19 28	352	23 28	52	3 28	52	3.47
53	3 32	113	7 32	173	11 32	233	15 32	293	19 32	353	23 32	53	3 32	53	3.53
54	3 36	114	7 36	174	11 36	234	15 36	294	19 36	354	23 36	54	3 36	54	3.60
55	3 40	115	7 40	175	11 40	235	15 40	295	19 40	355	23 40	55	3 40	55	3.67
56	3 44	116	7 44	176	11 44	236	15 44	296	19 44	356	23 44	56	3 44	56	3.73
57	3 48	117	7 48	177	11 48	237	15 48	297	19 48	357	23 48	57	3 48	57	3.80
58	3 52	118	7 52	178	11 52	238	15 52	298	19 52	358	23 52	58	3 52	58	3.87
59	3 56	119	7 56	179	11 56	239	15 56	299	19 56	359	23 56	59	3 56	59	3.93
60	4 0	120	8 0	180	12 0	240	16 0	300	20 0	360	24 0	60	4 0	60	4.00

APPENDIX.

1. TABLE FOR THE CONVERSION OF SIDEREAL TIME INTO MEAN TIME.
2. TABLE FOR THE CONVERSION OF MEAN TIME INTO SIDEREAL TIME.
3. TABLES OF REFRACTION.
4. CONSTANTS.

s	0^m	1^m	2^m	3^m				
	h m s	h m s	h m s	h m s	s	m s	s	m s
0	0 0 0	6 6 15	12 12 29	18 18 44	0.00	0 0	0.50	3 3
1	0 6 6	6 12 21	12 18 35	18 24 50	0.01	0 4	0.51	3 7
2	0 12 12	6 18 27	12 24 42	18 30 56	0.02	0 7	0.52	3 10
3	0 18 19	6 24 33	12 30 48	18 37 2	0.03	0 11	0.53	3 14
4	0 24 25	6 30 40	12 36 54	18 43 9	0.04	0 15	0.54	3 18
5	0 30 31	6 36 46	12 43 0	18 49 15	0.05	0 18	0.55	3 21
6	0 36 37	6 42 52	12 49 7	18 55 21	0.06	0 22	0.56	3 25
7	0 42 44	6 48 58	12 55 13	19 1 27	0.07	0 26	0.57	3 29
8	0 48 50	6 55 4	13 1 19	19 7 34	0.08	0 29	0.58	3 32
9	0 54 56	7 1 11	13 7 25	19 13 40	0.09	0 33	0.59	3 36
10	1 1 2	7 7 17	13 13 31	19 19 46	0.10	0 37	0.60	3 40
11	1 7 9	7 13 23	13 19 38	19 25 52	0.11	0 40	0.61	3 43
12	1 13 15	7 19 29	13 25 44	19 31 59	0.12	0 44	0.62	3 47
13	1 19 21	7 25 36	13 31 50	19 38 5	0.13	0 48	0.63	3 51
14	1 25 27	7 31 42	13 37 56	19 44 11	0.14	0 51	0.64	3 54
15	1 31 34	7 37 48	13 44 3	19 50 17	0.15	0 55	0.65	3 58
16	1 37 40	7 43 54	13 50 9	19 56 23	0.16	0 59	0.66	4 2
17	1 43 46	7 50 1	13 56 15	20 2 30	0.17	1 2	0.67	4 5
18	1 49 52	7 56 7	14 2 21	20 8 36	0.18	1 6	0.68	4 9
19	1 55 59	8 2 13	14 8 28	20 14 42	0.19	1 10	0.69	4 13
20	2 2 5	8 8 19	14 14 34	20 20 48	0.20	1 13	0.70	4 16
21	2 8 11	8 14 26	14 20 40	20 26 55	0.21	1 17	0.71	4 20
22	2 14 17	8 20 32	14 26 46	20 33 1	0.22	1 21	0.72	4 24
23	2 20 24	8 26 38	14 32 53	20 39 7	0.23	1 24	0.73	4 27
24	2 26 30	8 32 44	14 38 59	20 45 13	0.24	1 28	0.74	4 31
25	2 32 36	8 38 51	14 45 5	20 51 20	0.25	1 32	0.75	4 35
26	2 38 42	8 44 57	14 51 11	20 57 26	0.26	1 35	0.76	4 38
27	2 44 49	8 51 3	14 57 18	21 3 32	0.27	1 39	0.77	4 42
28	2 50 55	8 57 9	15 3 24	21 9 38	0.28	1 43	0.78	4 46
29	2 57 1	9 3 16	15 9 30	21 15 45	0.29	1 46	0.79	4 49
30	3 3 7	9 9 22	15 15 36	21 21 51	0.30	1 50	0.80	4 53
31	3 9 14	9 15 28	15 21 43	21 27 57	0.31	1 54	0.81	4 57
32	3 15 20	9 21 34	15 27 49	21 34 3	0.32	1 57	0.82	5 0
33	3 21 26	9 27 41	15 33 55	21 40 10	0.33	2 1	0.83	5 4
34	3 27 32	9 33 47	15 40 1	21 46 16	0.34	2 5	0.84	5 8
35	3 33 38	9 39 53	15 46 8	21 52 22	0.35	2 8	0.85	5 11
36	3 39 45	9 45 59	15 52 14	21 58 28	0.36	2 12	0.86	5 15
37	3 45 51	9 52 5	15 58 20	22 4 35	0.37	2 16	0.87	5 19
38	3 51 57	9 58 12	16 4 26	22 10 41	0.38	2 19	0.88	5 22
39	3 58 3	10 4 18	16 10 33	22 16 47	0.39	2 23	0.89	5 26
40	4 4 10	10 10 24	16 16 39	22 22 53	0.40	2 26	0.90	5 30
41	4 10 16	10 16 30	16 22 45	22 29 0	0.41	2 30	0.91	5 33
42	4 16 22	10 22 37	16 28 51	22 35 6	0.42	2 34	0.92	5 37
43	4 22 28	10 28 43	16 34 57	22 41 12	0.43	2 37	0.93	5 41
44	4 28 35	10 34 49	16 41 4	22 47 18	0.44	2 41	0.94	5 44
45	4 34 41	10 40 55	16 47 10	22 53 24	0.45	2 45	0.95	5 48
46	4 40 47	10 47 2	16 53 16	22 59 31	0.46	2 48	0.96	5 52
47	4 46 53	10 53 8	16 59 22	23 5 37	0.47	2 52	0.97	5 55
48	4 53 0	10 59 14	17 5 29	23 11 43	0.48	2 56	0.98	5 59
49	4 59 6	11 5 20	17 11 35	23 17 49	0.49	2 59	0.99	6 3
50	5 5 12	11 11 27	17 17 41	23 23 56	0.50	3 3	1.00	6 6
51	5 11 18	11 17 33	17 23 47	23 30 2				
52	5 17 25	11 23 39	17 29 54	23 36 8				
53	5 23 31	11 29 45	17 36 0	23 42 14				
54	5 29 37	11 35 52	17 42 6	23 48 21				
55	5 35 43	11 41 58	17 48 12	23 54 27				
56	5 41 50	11 48 4	17 54 19	24 0 33				
57	5 47 56	11 54 10	18 0 25	24 6 39				
58	5 54 2	12 0 17	18 6 31	24 12 46				
59	6 0 8	12 6 23	18 12 37	24 18 52				
60	6 6 15	12 12 29	18 18 44	24 24 58				

Example: Given $15^h0^m0^s$.
The table gives first:
for $14^h57^m18^s$ 2^m27^s
then for 2 42 0.44
15 0 0 2 27.44
The difference
$15^h0^m0^s - 2^m27^s.44$
$= 14^h57^m32^s.56$
is the required mean time.

s	0m	1m	2m	3m				
	h m s	h m s	h m s	h m s	s	m s	s	m s
0	0 0 0	6 5 15	12 10 29	18 15 44	0.00	0 0	0.50	3 3
1	0 6 5	6 11 20	12 16 34	18 21 49	0.01	0 4	0.51	3 6
2	0 12 10	6 17 25	12 22 40	18 27 54	0.02	0 7	0.52	3 10
3	0 18 16	6 23 30	12 28 45	18 33 59	0.03	0 11	0.53	3 14
4	0 24 21	6 29 36	12 34 50	18 40 5	0.04	0 15	0.54	3 17
5	0 30 26	6 35 41	12 40 55	18 46 10	0.05	0 18	0.55	3 21
6	0 36 31	6 41 46	12 47 1	18 52 15	0.06	0 22	0.56	3 25
7	0 42 37	6 47 51	12 53 6	18 58 20	0.07	0 26	0.57	3 28
8	0 48 42	6 53 56	12 59 11	19 4 26	0.08	0 29	0.58	3 32
9	0 54 47	7 0 2	13 5 16	19 10 31	0.09	0 33	0.59	3 35
10	1 0 52	7 6 7	13 11 21	19 16 36	0.10	0 37	0.60	3 39
11	1 6 58	7 12 12	13 17 27	19 22 41	0.11	0 40	0.61	3 43
12	1 13 3	7 18 17	13 23 32	19 28 47	0.12	0 44	0.62	3 46
13	1 19 8	7 24 23	13 29 37	19 34 52	0.13	0 47	0.63	3 50
14	1 25 13	7 30 28	13 35 42	19 40 57	0.14	0 51	0.64	3 54
15	1 31 19	7 36 33	13 41 48	19 47 2	0.15	0 55	0.65	3 57
16	1 37 24	7 42 38	13 47 53	19 53 7	0.16	0 58	0.66	4 1
17	1 43 29	7 48 44	13 53 58	19 59 13	0.17	1 2	0.67	4 5
18	1 49 34	7 54 49	14 0 3	20 5 18	0.18	1 6	0.68	4 8
19	1 55 40	8 0 54	14 6 9	20 11 23	0.19	1 9	0.69	4 12
20	2 1 45	8 6 59	14 12 14	20 17 28	0.20	1 13	0.70	4 16
21	2 7 50	8 13 5	14 18 19	20 23 34	0.21	1 17	0.71	4 19
22	2 13 55	8 19 10	14 24 24	20 29 39	0.22	1 20	0.72	4 23
23	2 20 1	8 25 15	14 30 30	20 35 44	0.23	1 24	0.73	4 27
24	2 26 6	8 31 20	14 36 35	20 41 49	0.24	1 28	0.74	4 30
25	2 32 11	8 37 26	14 42 40	20 47 55	0.25	1 31	0.75	4 34
26	2 38 16	8 43 31	14 48 45	20 54 0	0.26	1 35	0.76	4 38
27	2 44 22	8 49 36	14 54 51	21 0 5	0.27	1 39	0.77	4 41
28	2 50 27	8 55 41	15 0 56	21 6 10	0.28	1 42	0.78	4 45
29	2 56 32	9 1 47	15 7 1	21 12 16	0.29	1 46	0.79	4 49
30	3 2 37	9 7 52	15 13 6	21 18 21	0.30	1 50	0.80	4 52
31	3 8 43	9 13 57	15 19 12	21 24 26	0.31	1 53	0.81	4 56
32	3 14 48	9 20 2	15 25 17	21 30 31	0.32	1 57	0.82	4 59
33	3 20 53	9 26 8	15 31 22	21 36 37	0.33	2 1	0.83	5 3
34	3 26 58	9 32 13	15 37 27	21 42 42	0.34	2 4	0.84	5 7
35	3 33 3	9 38 18	15 43 33	21 48 47	0.35	2 8	0.85	5 10
36	3 39 9	9 44 23	15 49 38	21 54 52	0.36	2 11	0.86	5 14
37	3 45 14	9 50 28	15 55 43	22 0 58	0.37	2 15	0.87	5 18
38	3 51 19	9 56 34	16 1 48	22 7 3	0.38	2 19	0.88	5 21
39	3 57 24	10 2 39	16 7 54	22 13 8	0.39	2 22	0.89	5 25
40	4 3 30	10 8 44	16 13 59	22 19 13	0.40	2 26	0.90	5 29
41	4 9 35	10 14 49	16 20 4	22 25 19	0.41	2 30	0.91	5 32
42	4 15 40	10 20 55	16 26 9	22 31 24	0.42	2 33	0.92	5 36
43	4 21 45	10 27 0	16 32 14	22 37 29	0.43	2 37	0.93	5 40
44	4 27 51	10 33 5	16 38 20	22 43 34	0.44	2 41	0.94	5 43
45	4 33 56	10 39 10	16 44 25	22 49 39	0.45	2 44	0.95	5 47
46	4 40 1	10 45 16	16 50 30	22 55 45	0.46	2 48	0.96	5 51
47	4 46 6	10 51 21	16 56 35	23 1 50	0.47	2 52	0.97	5 54
48	4 52 12	10 57 26	17 2 41	23 7 55	0.48	2 55	0.98	5 58
49	4 58 17	11 3 31	17 8 46	23 14 0	0.49	2 59	0.99	6 2
50	5 4 22	11 9 37	17 14 51	23 20 6	0.50	3 3	1.00	6 5
51	5 10 27	11 15 42	17 20 56	23 26 11				
52	5 16 33	11 21 47	17 27 2	23 32 16				
53	5 22 38	11 27 52	17 33 7	23 38 21				
54	5 28 43	11 33 58	17 39 12	23 44 27				
55	5 34 48	11 40 3	17 45 17	23 50 32				
56	5 40 54	11 46 8	17 51 23	23 56 37				
57	5 46 59	11 52 13	17 57 28	24 2 42				
58	5 53 4	11 58 19	18 3 33	24 8 48				
59	5 59 9	12 4 24	18 9 38	24 14 53				
60	6 5 15	12 10 29	18 15 44	24 20 58				

Example: Let the given mean time be

$14^h 57^m 32^s.56$.

The table gives first

for $14^h 54^m 51^s$ $2^m 27^s$

then for 2 41 0.44

2 27.44

The sum $14^h 57^m 32^s.56 + 2^m 27^s.44 = 15^h 0^m 0^s.00$ is the required sidereal time.

TABLES OF REFRACTION

BASED UPON THOSE

OF BESSEL.

THERMOMETER: RÉAUMUR.

BAROMETER: PARIS INCHES AND LINES.

BAROMETER		
PAR. M.	MILL^m.	ENGL. INCH.
26″ 3‴	710.6	27″.99
4	712.9	28.07
5	715.1	28.16
6	717.4	28.25
7	719.6	28.34
8	721.9	28.43
9	724.1	28.52
10	726.4	28.61
11	728.6	28.70
27 0	730.9	28.79
1	733.1	28.87
2	735.4	28.96
3	737.7	29.05
4	739.9	29.14
5	742.2	29.23
6	744.4	29.32
7	746.7	29.41
8	748.9	29.50
9	751.2	29.58
10	753.5	29.67
11	755.7	29.76
28 0	758.0	29.85
1	760.2	29.94
2	762.5	30.03
3	764.7	30.12
4	767.0	30.21
5	769.2	30.30
6	771.5	30.38
7	773.8	30.47
8	776.0	30.56
9	778.3	30.65
10	780.5	30.74
11	782.8	30.83
29 0	785.0	30.92
1	787.3	31.01
2	789.5	31.10

For Conversion

ENGL. INCH.	PAR. LINES.
0°.01	0″.11
2	.23
3	.34
4	.45
5	.56
6	.68
7	.79
8	0.90
0.09	1.01

THERMOMETER		
RÉAUM.	CELSIUS	FAHR.
− 16°	− 20°.0	− 4°.0
15	18.8	− 1.8
14	17.5	+ 0.5
13	16.3	2.8
12	15.0	5.0
11	13.8	7.3
10	12.5	9.5
9	11.3	11.8
8	10.0	14.0
7	8.8	16.3
6	7.5	18.5
5	6.3	20.8
4	5.0	23.0
3	3.8	25.3
2	2.5	27.5
− 1	− 1.3	29.8
0	0.0	32.0
+ 1	+ 1.3	34.3
2	2.5	36.5
3	3.8	38.8
4	5.0	41.0
5	6.3	43.3
6	7.5	45.5
7	8.8	47.8
8	10.0	50.0
9	11.3	52.3
10	12.5	54.5
11	13.8	56.8
12	15.0	59.0
13	16.3	61.3
14	17.5	63.5
15	18.8	65.8
16	20.0	68.0
17	21.3	70.3
18	22.5	72.5
19	23.8	74.8
20	25.0	77.0
21	26.3	79.3
22	27.5	81.5
23	28.8	83.8
24	30.0	86.0
25	31.3	88.3
26	32.5	90.5
27	33.8	92.8
+ 28	35.0	95.0

CORRECTION OF BAROMETER.

t External

t′ Attached

Thermometer according to Réaumur.

t—t′	Par. Lin.
0°	0″.00
1	0.07
2	0.14
3	0.20
4	0.27
5	0.34
6	0.41
7	0.48
8	0.54
9	0.61
10	0.68

This correction is of the same sign with t—t′.

Note: In the second and third column .3 and .8 stand for .25 and .75 resp.

For Conversion

FAHR.	RÉAUM.
0°.1	0°.04
2	09
3	13
4	18
5	22
6	27
7	31
8	36
9	0.40
1.0	0.44
2.0	0.89

TABLE I. MEAN REFRACTION.

Appt. Altde.	Refr.		Appt. Altd.	Refr.		Appt. Altd.	Refr.		Appt. Altd.	Refr.		Appt. Altde.	Refr.	
0° 0'	34' 54.1"	124.9"	7° 0'	7' 19.7"	9.2"	14° 0'	3' 47.4"	5.3"	28° 0'	1' 48.2"	1.5"	42°	64.0"	2.2"
10	32 49.2	116.9	10	7 10.5	8.8	20	3 42.1	5.1	20	1 46.7	1.4	43	61.8	2.1
20	30 52.3	108.8	20	7 1.7	8.4	40	3 37.0	4.9	40	1 45.3	1.5	44	59.7	2.0
30	29 3.5	100.8	30	6 53.3	8.2	15 0	3 32.1	4.7	29 0	1 43.8	1.4	45	57.7	2.0
40	27 22.7	92.9	40	6 45.1	7.9	20	3 27.4	4.5	20	1 42.4	1.4	46	55.7	1.9
50	25 49.8	85.2	50	6 37.2	7.6	40	3 22.9	4.3	40	1 41.0	1.3	47	53.8	1.9
1 0	24 24.6	77.9	8 0	6 29.6	7.3	16 0	3 18.6	4.1	30 0	1 39.7	1.3	48	51.9	1.7
10	23 6.7	71.2	10	6 22.3	7.1	20	3 14.5	4.0	20	1 38.4	1.3	49	50.2	1.8
20	21 55.6	64.7	20	6 15.2	6.8	40	3 10.5	3.9	40	1 37.1	1.3	50	48.4	1.7
30	20 50.9	59.0	30	6 8.4	6.6	17 0	3 6.6	3.7	31 0	1 35.8	1.3	51	46.7	1.6
40	19 51.9	53.9	40	6 1.8	6.4	20	3 2.9	3.6	20	1 34.5	1.2	52	45.1	1.6
50	18 58.0	49.4	50	5 55.4	6.1	40	2 59.3	3.5	40	1 33.3	1.2	53	43.5	1.6
2 0	18 8.6	45.6	9 0	5 49.3	6.0	18 0	2 55.8	3.3	32 0	1 32.1	1.2	54	41.9	1.5
10	17 23.0	42.3	10	5 43.3	5.7	20	2 52.5	3.2	20	1 30.9	1.1	55	40.4	1.5
20	16 40.7	39.8	20	5 37.6	5.6	40	2 49.3	3.2	40	1 29.8	1.1	56	38.9	1.4
30	16 0.9	37.5	30	5 32.0	5.5	19 0	2 46.1	3.0	33 0	1 28.7	1.1	57	37.5	1.4
40	15 23.4	35.6	40	5 26.5	5.2	20	2 43.1	2.9	20	1 27.6	1.1	58	36.1	1.4
50	14 47.8	33.2	50	5 21.3	5.1	40	2 40.2	2.9	40	1 26.5	1.1	59	34.7	1.4
3 0	14 14.6	30.9	10 0	5 16.2	5.0	20 0	2 37.3	2.8	34 0	1 25.4	1.1	60	33.3	1.3
10	13 43.7	28.7	10	5 11.2	4.8	20	2 34.5	2.6	20	1 24.3	1.0	61	32.0	1.3
20	13 15.0	26.7	20	5 6.4	4.7	40	2 31.9	2.6	40	1 23.3	1.0	62	30.7	1.3
30	12 48.3	24.6	30	5 1.7	4.5	21 0	2 29.3	2.5	35 0	1 22.3	1.0	63	29.4	1.2
40	12 23.7	23.0	40	4 57.2	4.4	20	2 26.8	2.5	20	1 21.3	1.0	64	28.2	1.3
50	12 0.7	21.8	50	4 52.8	4.3	40	2 24.3	2.4	40	1 20.3	1.0	65	26.9	1.2
4 0	11 38.9	20.6	11 0	4 48.5	4.2	22 0	2 21.9	2.3	36 0	1 19.3	1.0	66	25.7	1.2
10	11 18.3	19.7	10	4 44.3	4.1	20	2 19.6	2.2	20	1 18.3	0.9	67	24.5	1.2
20	10 58.6	19.0	20	4 40.2	3.9	40	2 17.4	2.2	40	1 17.4	0.9	68	23.3	1.1
30	10 39.6	18.4	30	4 36.3	3.9	23 0	2 15.2	2.2	37 0	1 16.5	0.9	69	22.2	1.2
40	10 21.2	17.9	40	4 32.4	3.7	20	2 13.0	2.1	20	1 15.6	0.9	70	21.0	1.1
50	10 3.3	16.8	50	4 28.7	3.7	40	2 10.9	2.0	40	1 14.7	0.9	71	19.9	1.1
5 0	9 46.5	15.6	12 0	4 25.0	3.6	24 0	2 8.9	1.9	38 0	1 13.8	0.9	72	18.8	1.1
10	9 30.9	14.9	10	4 21.4	3.4	20	2 7.0	1.9	20	1 12.9	0.9	73	17.7	1.1
20	9 16.0	14.1	20	4 18.0	3.4	40	2 5.1	1.9	40	1 12.0	0.8	74	16.6	1.1
30	9 1.9	13.5	30	4 14.6	3.3	25 0	2 3.2	1.8	39 0	1 11.2	0.9	75	15.5	1.0
40	8 48.4	12.8	40	4 11.3	3.2	20	2 1.4	1.8	20	1 10.3	0.8	76	14.5	1.1
50	8 35.6	12.3	50	4 8.1	3.2	40	1 59.6	1.8	40	1 9.5	0.8	77	13.4	1.1
6 0	8 23.3	11.7	13 0	4 4.9	3.1	26 0	1 57.8	1.7	40 0	1 8.7	0.8	78	12.3	1.1
10	8 11.6	11.3	10	4 1.8	3.0	20	1 56.1	1.7	20	1 7.9	0.8	79	11.2	1.0
20	8 0.3	10.8	20	3 58.8	2.9	40	1 54.4	1.6	40	1 7.1	0.8	80	10.2	1.1
30	7 49.5	10.3	30	3 55.9	2.9	27 0	1 52.8	1.6	41 0	1 6.3	0.8	81	9.1	1.0
40	7 39.2	10.0	40	3 53.0	2.8	20	1 51.2	1.5	20	1 5.5	0.8	82	8.1	4.0
50	7 29.2	9.5	50	3 50.2	2.8	40	1 49.7	1.5	40	1 4.7	0.7	86	4.1	4.1
7 0	7 19.7		14 0	3 47.4		28 0	1 48.2		42 0	1 4.0		90	0.0	

TABLE II. CORRECTION FOR TEMPERATURE.

THERM. RÉAUM.	MEAN REFRACTION.													
	20"	40"	1' 0"	1' 20"	1' 40"	2' 0"	2' 20"	2' 40"	3' 0"	3' 20"	3' 40"	4' 0"	4' 20"	4' 40"
	+	+	+	+	+	+	+	+	+	+	+	+	+	+
−16°	2.4"	4.8"	7.1"	9.5"	11.9"	14.4"	16.8"	19.2"	21.7"	24.2"	26.7"	29.2"	31.8"	34.4"
−15	2.3	4.5	6.8	9.1	11.4	13.7	15.9	18.3	20.7	23.0	25.4	27.8	30.3	32.7
−14	2.1	4.3	6.5	8.6	10.8	13.0	15.1	17.4	19.6	21.9	24.1	26.4	28.7	31.1
−13	2.0	4.1	6.1	8.2	10.2	12.3	14.3	16.5	18.6	20.7	22.9	25.1	27.2	29.5
−12	1.9	3.9	5.8	7.7	9.7	11.6	13.6	15.6	17.6	19.6	21.6	23.7	25.8	27.9
−11	1.8	3.6	5.5	7.3	9.1	11.0	12.8	14.7	16.6	18.5	20.4	22.3	24.3	26.3
−10	1.7	3.4	5.1	6.9	8.6	10.3	12.1	13.8	15.6	17.4	19.2	21.0	22.8	24.7
− 9	1.6	3.2	4.8	6.4	8.1	9.7	11.3	13.0	14.6	16.3	18.0	19.7	21.4	23.2
− 8	1.5	3.0	4.5	6.0	7.5	9.0	10.6	12.1	13.7	15.2	16.8	18.4	20.0	21.6
− 7	1.4	2.8	4.2	5.6	7.0	8.4	9.8	11.3	12.7	14.1	15.6	17.1	18.6	20.1
− 6	1.3	2.6	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.1	14.4	15.8	17.2	18.6
− 5	1.2	2.4	3.6	4.8	6.0	7.1	8.4	9.6	10.8	12.0	13.3	14.5	15.8	17.1
− 4	1.1	2.2	3.3	4.3	5.4	6.5	7.6	8.7	9.9	11.0	12.1	13.3	14.4	15.6
− 3	1.0	2.0	2.9	3.9	4.9	5.9	6.9	7.9	8.9	10.0	11.0	12.0	13.1	14.1
− 2	0.9	1.8	2.6	3.5	4.4	5.3	6.2	7.1	8.0	8.9	9.9	10.8	11.7	12.7
− 1	0.8	1.6	2.3	3.1	3.9	4.7	5.5	6.3	7.1	7.9	8.7	9.6	10.4	11.2
0	0.7	1.4	2.0	2.7	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	9.1	9.8
+ 1	0.6	1.2	1.7	2.3	2.9	3.5	4.1	4.7	5.3	5.9	6.5	7.1	7.8	8.4
+ 2	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9	4.4	4.9	5.4	5.9	6.5	7.0
+ 3	0.4	0.8	1.2	1.6	1.9	2.3	2.7	3.1	3.5	3.9	4.4	4.8	5.2	5.6
+ 4	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2
+ 5	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.7	2.9
+ 6	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.4	1.5
+ 7	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
	—	—	—	—	—	—	—	—	—	—	—	—	—	—
+ 8	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2
+ 9	0.2	0.3	0.5	0.7	0.9	1.0	1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5
+10	0.3	0.5	0.8	1.1	1.3	1.6	1.9	2.1	2.4	2.7	2.9	3.2	3.5	3.8
+11	0.4	0.7	1.1	1.4	1.8	2.1	2.5	2.8	3.2	3.6	3.9	4.3	4.7	5.1
+12	0.4	0.9	1.3	1.8	2.2	2.7	3.1	3.6	4.0	4.5	4.9	5.4	5.9	6.4
+13	0.5	1.1	1.6	2.1	2.7	3.2	3.7	4.3	4.8	5.4	5.9	6.5	7.1	7.6
+14	0.6	1.2	1.9	2.5	3.1	3.7	4.4	5.0	5.6	6.3	6.9	7.6	8.2	8.9
+15	0.7	1.4	2.1	2.8	3.5	4.2	5.0	5.7	6.4	7.1	7.9	8.7	9.4	10.1
+16	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	7.2	8.0	8.8	9.7	10.5	11.4
+17	0.9	1.8	2.6	3.5	4.4	5.3	6.2	7.1	8.0	8.9	9.8	10.7	11.6	12.6
+18	1.0	1.9	2.9	3.8	4.8	5.8	6.8	7.8	8.7	9.7	10.7	11.8	12.8	13.8
+19	1.0	2.1	3.1	4.2	5.2	6.3	7.4	8.4	9.5	10.6	11.7	12.8	13.9	15.0
+20	1.1	2.3	3.4	4.5	5.7	6.8	7.9	9.1	10.3	11.4	12.6	13.8	15.0	16.2
+21	1.2	2.4	3.6	4.8	6.1	7.3	8.5	9.8	11.0	12.3	13.5	14.8	16.1	17.4
+22	1.3	2.6	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.1	14.4	15.8	17.2	18.6
+23	1.4	2.7	4.1	5.5	6.9	8.3	9.7	11.1	12.5	13.9	15.3	16.8	18.3	19.7
+24	1.5	2.9	4.4	5.8	7.3	8.8	10.2	11.7	13.2	14.7	16.2	17.8	19.3	20.9
+25	1.5	3.1	4.6	6.1	7.7	9.2	10.8	12.4	13.9	15.5	17.1	18.7	20.4	22.0
+26	1.6	3.2	4.8	6.5	8.1	9.7	11.4	13.0	14.7	16.3	18.0	19.7	21.4	23.2
+27	1.7	3.4	5.1	6.8	8.5	10.2	11.9	13.6	15.4	17.1	18.9	20.7	22.5	24.3
+28	1.8	3.5	5.3	7.1	8.9	10.6	12.4	14.3	16.1	17.9	19.8	21.6	23.5	25.4

ARGUMENTS: EXTERNAL THERMOMETER AND MEAN REFRACTION.

MEAN REFRACTION.													
5′ 0″	5′ 20″	5′ 40″	6′ 0″	6′ 20″	6′ 40″	7′ 0″	7′ 20″	7′ 40″	8′ 0″	8′ 20″	8′ 40″	9′ 0″	THERM. RÉAUM.
+	+	+	+	+	+	+	+	+	+	+	+	+	
37″.0	39″.6	42″.3	45″.1	47″.8	50″.6	53″.5	56″.3	59″.2	62″.2	65″.2	68″.2	1′ 11″.2	− 16°
35.2	37.7	40.3	42.9	45.5	48.2	50.9	53.6	56.4	59.2	62.0	64.9	1 7.8	− 15
33.5	35.8	38.3	40.7	43.2	45.8	48.3	50.9	53.6	56.2	58.9	61.7	1 4.4	− 14
31.7	34.0	36.3	38.6	41.0	43.4	45.8	48.3	50.8	53.3	55.9	58.4	1 1.1	− 13
30.0	32.1	34.3	36.5	38.8	41.0	43.3	45.7	48.0	50.4	52.8	55.3	57.7	− 12
28.3	30.3	32.4	34.4	36.6	38.7	40.9	43.1	45.3	47.5	49.8	52.1	54.5	− 11
26.6	28.5	30.4	32.4	34.4	36.4	38.4	40.5	42.6	44.7	46.8	49.0	51.2	− 10
24.9	26.7	28.5	30.3	32.2	34.1	36.0	37.9	39.9	41.9	43.9	45.9	48.0	− 9
23.3	24.9	26.6	28.3	30.1	31.8	33.6	35.4	37.2	39.1	41.0	42.8	44.8	− 8
21.6	23.2	24.7	26.3	27.9	29.6	31.2	32.9	34.6	36.3	38.1	39.8	41.6	− 7
20.0	21.4	22.9	24.3	25.8	27.4	28.9	30.4	32.0	33.6	35.2	36.8	38.5	− 6
18.4	19.7	21.0	22.4	23.8	25.1	26.5	28.0	29.4	30.9	32.4	33.9	35.4	− 5
16.8	18.0	19.2	20.4	21.7	23.0	24.2	25.5	26.9	28.2	29.5	30.9	32.3	− 4
15.3	16.3	17.4	18.5	19.7	20.8	22.0	23.1	24.3	25.5	26.8	28.0	29.3	− 3
13.8	14.6	15.6	16.6	17.6	18.7	19.7	20.8	21.8	22.9	24.0	25.1	26.2	− 2
12.2	13.0	13.8	14.7	15.6	16.5	17.5	18.4	19.4	20.3	21.3	22.3	23.3	− 1
10.6	11.3	12.1	12.9	13.6	14.4	15.2	16.1	16.9	17.7	18.6	19.4	20.3	0
9.0	9.7	10.3	11.0	11.7	12.4	13.0	13.7	14.5	15.2	15.9	16.6	17.4	+ 1
7.5	8.1	8.6	9.2	9.7	10.3	10.9	11.5	12.0	12.6	13.3	13.9	14.5	+ 2
6.0	6.5	6.9	7.4	7.8	8.3	8.7	9.2	9.7	10.1	10.6	11.1	11.6	+ 3
4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.3	7.7	8.0	8.4	8.8	+ 4
3.1	3.3	3.5	3.8	4.0	4.2	4.5	4.7	5.0	5.2	5.4	5.7	6.0	+ 5
1.6	1.8	1.9	2.0	2.1	2.2	2.4	2.5	2.6	2.8	2.9	3.0	3.2	+ 6
0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	+ 7
—	—	—	—	—	—	—	—	—	—	—	—	—	
1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.3	+ 8
2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	+ 9
4.1	4.4	4.6	4.9	5.2	5.5	5.8	6.1	6.5	6.8	7.1	7.4	7.7	+ 10
5.5	5.8	6.2	6.6	7.0	7.4	7.8	8.3	8.7	9.1	9.5	10.0	10.4	+ 11
6.8	7.3	7.8	8.3	8.8	9.3	9.8	10.4	10.9	11.4	12.0	12.5	13.0	+ 12
8.2	8.8	9.4	10.0	10.6	11.2	11.8	12.4	13.1	13.7	14.3	15.0	15.7	+ 13
9.6	10.2	10.9	11.6	12.3	13.0	13.8	14.5	15.2	16.0	16.7	17.5	18.2	+ 14
10.9	11.7	12.5	13.3	14.1	14.9	15.7	16.5	17.4	18.2	19.1	19.9	20.8	+ 15
12.2	13.1	14.0	14.9	15.8	16.7	17.6	18.5	19.5	20.4	21.4	22.4	23.4	+ 16
13.6	14.5	15.5	16.5	17.5	18.5	19.5	20.5	21.6	22.6	23.7	24.8	25.9	+ 17
14.9	15.9	17.0	18.1	19.2	20.3	21.4	22.5	23.7	24.8	26.0	27.2	28.4	+ 18
16.2	17.3	18.5	19.6	20.8	22.0	23.3	24.5	25.7	27.0	28.3	29.5	30.9	+ 19
17.4	18.7	19.9	21.2	22.5	23.8	25.1	26.4	27.8	29.1	30.5	31.9	33.3	+ 20
18.7	20.1	21.4	22.8	24.1	25.5	26.9	28.4	29.8	31.3	32.7	34.2	35.7	+ 21
20.0	21.4	22.8	24.3	25.8	27.2	28.8	30.3	31.8	33.4	34.9	36.5	38.1	+ 22
21.2	22.7	24.3	25.8	27.4	28.9	30.6	32.2	33.8	35.5	37.1	38.8	40.5	+ 23
22.5	24.1	25.7	27.3	29.0	30.6	32.3	34.1	35.8	37.5	39.3	41.1	42.9	+ 24
23.7	25.4	27.1	28.8	30.6	32.3	34.1	35.9	37.7	39.6	41.5	43.4	45.3	+ 25
24.9	26.7	28.5	30.3	32.1	34.0	35.9	37.8	39.7	41.6	43.6	45.6	47.6	+ 26
26.1	28.0	29.9	31.8	33.7	35.6	37.6	39.6	41.6	43.7	45.7	47.8	49.9	+ 27
27.3	29.3	31.2	33.2	35.2	37.3	39.3	41.4	43.5	45.7	47.8	50.0	52.2	+ 28

TABLE II. CORRECTION FOR TEMPERATURE.

THERM. RÉAUM.	MEAN REFRACTION.										
	9′ 0″	9′ 20″	9′ 40″	10′ 0″	10′20″	10′40″	11′ 0″	11′20″	11′40″	12′ 0″	12′40″
	+	+	+	+	+	+	+	+	+	+	+
− 16°	1′ 11.″2	1′ 14.″3	1′ 17.″5	1′ 20.″7	1′ 23.″9	1′ 27.″2	1′ 30.″5	1′ 33.″8	1′ 37.″2	1′ 40.″7	1′ 44.″1
− 15	1 7.8	1 10.8	1 13.8	1 16.8	1 19.8	1 23.0	1 26.1	1 29.3	1 32.5	1 35.8	1 39.1
− 14	1 4.4	1 7.2	1 10.1	1 12.9	1 15.8	1 18.8	1 21.8	1 24.8	1 27.9	1 31.0	1 34.1
− 13	1 1.1	1 3.7	1 6.4	1 9.1	1 11.9	1 14.7	1 17.5	1 20.4	1 23.3	1 26.2	1 29.2
− 12	57.7	1 0.2	1 2.8	1 5.4	1 8.0	1 10.6	1 13.3	1 16.0	1 18.7	1 21.5	1 24.3
− 11	54.5	56.8	59.2	1 1.6	1 4.1	1 6.6	1 9.1	1 11.7	1 14.2	1 16.9	1 19.5
− 10	51.2	53.4	55.7	57.9	1 0.2	1 2.6	1 5.0	1 7.4	1 9.8	1 12.3	1 14.8
− 9	48.0	50.0	52.1	54.3	56.4	58.6	1 0.9	1 3.1	1 5.4	1 7.7	1 10.0
− 8	44.8	46.7	48.7	50.7	52.7	54.7	56.8	58.9	1 1.0	1 3.2	1 5.4
− 7	41.6	43.4	45.2	47.1	49.0	50.9	52.8	54.7	56.7	58.7	1 0.7
− 6	38.5	40.2	41.8	43.5	45.3	47.0	48.8	50.6	52.4	54.3	56.2
− 5	35.4	36.9	38.5	40.0	41.6	43.2	44.9	46.5	48.2	49.9	51.6
− 4	32.3	33.7	35.1	36.6	38.0	39.5	41.0	42.5	44.0	45.6	47.2
− 3	29.3	30.5	31.8	33.1	34.4	35.8	37.1	38.5	39.9	41.3	42.7
− 2	26.2	27.4	28.5	29.7	30.9	32.1	33.3	34.5	35.8	37.0	38.3
− 1	23.3	24.3	25.3	26.3	27.4	28.4	29.5	30.6	31.7	32.8	34.0
0	20.3	21.1	22.1	23.0	23.9	24.8	25.8	26.7	27.7	28.7	29.7
+ 1	17.4	18.1	18.9	19.7	20.5	21.2	22.1	22.9	23.7	24.5	25.4
+ 2	14.5	15.1	15.7	16.4	17.0	17.7	18.4	19.1	19.8	20.4	21.2
+ 3	11.6	12.1	12.6	13.2	13.7	14.2	14.7	15.3	15.8	16.4	17.0
+ 4	8.8	9.2	9.5	9.9	10.3	10.7	11.1	11.6	12.0	12.4	12.8
+ 5	6.0	6.2	6.5	6.8	7.0	7.3	7.6	7.9	8.1	8.4	8.7
+ 6	3.2	3.3	3.5	3.6	3.7	3.9	4.0	4.2	4.4	4.5	4.7
+ 7	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7
	—	—	—	—	—	—	—	—	—	—	—
+ 8	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3
+ 9	5.0	5.3	5.5	5.7	5.9	6.1	6.4	6.6	6.8	7.1	7.3
+ 10	7.7	8.1	8.4	8.7	9.1	9.4	9.8	10.1	10.5	10.8	11.2
+ 11	10.4	10.8	11.3	11.7	12.2	12.7	13.1	13.6	14.1	14.6	15.1
+ 12	13.0	13.6	14.2	14.7	15.3	15.9	16.5	17.1	17.7	18.3	18.9
+ 13	15.7	16.3	17.0	17.7	18.4	19.1	19.8	20.5	21.2	22.0	22.7
+ 14	18.2	19.0	19.8	20.6	21.4	22.2	23.1	23.9	24.8	25.6	26.5
+ 15	20.8	21.7	22.6	23.5	24.4	25.4	26.3	27.3	28.2	29.2	30.2
+ 16	23.4	24.4	25.4	26.4	27.4	28.5	29.5	30.6	31.7	32.8	33.9
+ 17	25.9	27.0	28.1	29.2	30.4	31.5	32.7	33.9	35.1	36.3	37.6
+ 18	28.4	29.6	30.8	32.1	33.3	34.6	35.9	37.2	38.5	39.8	41.2
+ 19	30.9	32.2	33.5	34.9	36.2	37.6	39.0	40.4	41.9	43.3	44.8
+ 20	33.3	34.7	36.2	37.6	39.1	40.6	42.1	43.6	45.2	46.7	48.3
+ 21	35.7	37.3	38.8	40.4	42.0	43.6	45.2	46.8	48.5	50.1	51.8
+ 22	38.1	39.8	41.4	43.1	44.8	46.5	48.2	50.0	51.7	53.5	55.3
+ 23	40.5	42.3	44.0	45.8	47.6	49.4	51.2	53.1	55.0	56.9	58.8
+ 24	42.9	44.7	46.6	48.5	50.4	52.3	54.2	56.2	58.2	1 0.2	1 2.2
+ 25	45.3	47.2	49.2	51.1	53.1	55.2	57.2	59.3	1 1.4	1 3.5	1 5.6
+ 26	47.6	49.6	51.7	53.8	55.9	58.0	1 0.2	1 2.3	1 4.5	1 6.7	1 9.0
+ 27	49.9	52.1	54.2	56.4	58.6	1 0.8	1 3.1	1 5.3	1 7.6	1 10.0	1 12.3
+ 28	52.2	54.5	56.7	59.0	1 1.3	1 3.6	1 6.0	1 8.3	1 10.7	1 13.2	1 15.6

ARGUMENTS: EXTERNAL THERMOMETER AND MEAN REFRACTION.

MEAN REFRACTION.											
12′40″	13′ 0″	13′20″	13′40″	14′ 0″	14′20″	14′40″	15′ 0″	15′20″	15′40″	16′ 0″	THERM. RÉAUM.
+	+	+	+	+	+	+	+	+	+	+	
1′ 47″.7	1′ 51″.3	1′ 54″.9	1′ 58″.5	2′ 2″.2	2′ 6″.0	2′ 9″.7	2′ 13″.5	2′ 17″.4	2′ 21″.3	2′ 25″.3	− 16°
1 42.5	1 45.9	1 49.3	1 52.8	1 56.3	1 59.9	2 3.4	2 7.1	2 10.7	2 14.5	2 18.2	− 15
1 37.3	1 40.6	1 43.8	1 47.1	1 50.5	1 53.8	1 57.2	2 0.7	2 4.2	2 7.7	2 11.2	− 14
1 32.2	1 35.3	1 38.4	1 41.5	1 44.7	1 47.9	1 51.1	1 54.3	1 57.6	2 1.0	2 4.3	− 13
1 27.2	1 30.1	1 33.0	1 36.0	1 39.0	1 42.0	1 45.0	1 48.1	1 51.2	1 54.3	1 57.5	− 12
1 22.2	1 24.9	1 27.7	1 30.5	1 33.3	1 36.1	1 39.0	1 41.9	1 44.8	1 47.8	1 50.8	− 11
1 17.3	1 19.8	1 22.4	1 25.0	1 27.7	1 30.4	1 33.1	1 35.8	1 38.5	1 41.3	1 44.1	− 10
1 12.4	1 14.8	1 17.2	1 19.7	1 22.2	1 24.7	1 27.2	1 29.7	1 32.3	1 34.9	1 37.5	− 9
1 7.6	1 9.8	1 12.1	1 14.4	1 16.7	1 19.0	1 21.3	1 23.7	1 26.1	1 28.6	1 31.0	− 8
1 2.8	1 4.9	1 7.0	1 9.1	1 11.2	1 13.4	1 15.6	1 17.8	1 20.0	1 22.3	1 24.6	− 7
58.1	1 0.0	1 1.9	1 3.9	1 5.9	1 7.9	1 9.9	1 11.9	1 14.0	1 16.1	1 18.2	− 6
53.4	55.1	56.9	58.7	1 0.5	1 2.4	1 4.2	1 6.1	1 8.0	1 10.0	1 11.9	− 5
48.7	50.4	52.0	53.6	55.3	57.0	58.7	1 0.4	1 2.1	1 3.9	1 5.6	− 4
44.2	45.6	47.1	48.6	50.1	51.6	53.1	54.7	56.3	57.9	59.5	− 3
39.6	40.9	42.2	43.6	44.9	46.3	47.7	49.1	50.5	51.9	53.3	− 2
35.1	36.3	37.4	38.6	39.8	41.0	42.2	43.5	44.7	46.0	47.3	− 1
30.7	31.7	32.7	33.7	34.8	35.8	36.9	38.0	39.1	40.2	41.3	0
26.2	27.1	28.0	28.9	29.8	30.7	31.6	32.5	33.4	34.4	35.3	+ 1
21.9	22.6	23.3	24.1	24.8	25.6	26.3	27.1	27.9	28.7	29.5	+ 2
17.5	18.1	18.7	19.3	19.9	20.5	21.1	21.7	22.4	23.0	23.7	+ 3
13.3	13.7	14.1	14.6	15.0	15.5	16.0	16.4	16.9	17.4	17.9	+ 4
9.0	9.3	9.6	9.9	10.2	10.6	10.9	11.2	11.5	11.9	12.2	+ 5
4.8	5.0	5.2	5.3	5.5	5.7	5.8	6.0	6.2	6.4	6.6	+ 6
0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	+ 7
—	—	—	—	—	—	—	—	—	—	—	
3.4	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	+ 8
7.5	7.8	8.0	8.3	8.5	8.7	9.0	9.2	9.5	9.8	10.0	+ 9
11.6	11.9	12.3	12.7	13.1	13.5	13.8	14.2	14.6	15.0	15.4	+ 10
15.6	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7	20.2	20.8	+ 11
19.5	20.2	20.8	21.4	22.1	22.7	23.4	24.1	24.7	25.4	26.1	+ 12
23.4	24.2	25.0	25.7	26.5	27.3	28.1	28.9	29.7	30.5	31.4	+ 13
27.3	28.2	29.1	30.0	30.9	31.8	32.8	33.7	34.7	35.6	36.6	+ 14
31.2	32.2	33.2	34.2	35.3	36.3	37.4	38.5	39.5	40.6	41.7	+ 15
35.0	36.1	37.3	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	+ 16
38.8	40.0	41.3	42.6	43.9	45.2	46.5	47.8	49.2	50.5	51.9	+ 17
42.5	43.9	45.3	46.7	48.1	49.5	51.0	52.4	53.9	55.4	56.9	+ 18
46.2	47.7	49.2	50.8	52.3	53.8	55.4	57.0	58.6	1 0.2	1 1.9	+ 19
49.9	51.5	53.1	54.8	56.5	58.1	59.8	1 1.5	1 3.3	1 5.0	1 6.8	+ 20
53.5	55.3	57.0	58.8	1 0.6	1 2.4	1 4.2	1 6.0	1 7.9	1 9.7	1 11.6	+ 21
57.1	59.0	1 0.9	1 2.8	1 4.7	1 6.6	1 8.5	1 10.5	1 12.4	1 14.4	1 16.4	+ 22
1 0.7	1 2.7	1 4.7	1 6.7	1 8.7	1 10.7	1 12.8	1 14.9	1 17.0	1 19.1	1 21.2	+ 23
1 4.3	1 6.3	1 8.4	1 10.6	1 12.7	1 14.9	1 17.0	1 19.2	1 21.4	1 23.7	1 25.9	+ 24
1 7.8	1 10.0	1 12.2	1 14.4	1 16.7	1 18.9	1 21.2	1 23.6	1 25.9	1 28.2	1 30.6	+ 25
1 11.3	1 13.6	1 15.9	1 18.2	1 20.6	1 23.0	1 25.4	1 27.8	1 30.3	1 32.8	1 35.3	+ 26
1 14.7	1 17.1	1 19.6	1 22.0	1 24.5	1 27.0	1 29.5	1 32.1	1 34.7	1 37.3	1 39.9	+ 27
1 18.1	1 20.7	1 23.2	1 25.8	1 28.4	1 31.0	1 33.6	1 36.3	1 39.0	1 41.7	1 44.5	+ 28

TABLE III. CORRECTION FOR HEIGHT OF BAROMETER.

BARO-METER	MEAN REFRACTION + CORR. TAB. II.												
	0′20″	0′40″	1′ 0″	1′20″	1′40″	2′ 0″	2′20″	2′40″	3′ 0″	3′20″	3′40″	4′ 0″	4′20″
	—	—	—	—	—	—	—	—	—	—	—	—	—
26″ 3‴	1″.1	2″.2	3″.3	4″.4	5″.5	6″.6	7″.7	8″.8	9″.9	11″.0	12″.1	13″.2	14″.3
4	1.0	2.1	3.1	4.2	5.2	6.2	7.3	8.3	9.3	10.4	11.4	12.5	13.5
5	1.0	1.9	2.9	3.9	4.9	5.9	6.8	7.8	8.8	9.8	10.8	11.7	12.7
6	0.9	1.8	2.7	3.7	4.6	5.5	6.4	7.3	8.3	9.2	10.1	11.0	11.9
7	0.9	1.7	2.6	3.4	4.3	5.1	6.0	6.9	7.7	8.6	9.4	10.3	11.1
8	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	7.2	8.0	8.8	9.6	10.4
9	0.7	1.5	2.2	2.9	3.7	4.4	5.2	5.9	6.6	7.4	8.1	8.8	9.6
10	0.7	1.4	2.0	2.7	3.4	4.1	4.7	5.4	6.1	6.8	7.5	8.1	8.8
11	0.6	1.2	1.8	2.5	3.1	3.7	4.3	4.9	5.5	6.2	6.8	7.4	8.0
27 0	0.6	1.1	1.7	2.2	2.8	3.3	3.9	4.4	5.0	5.6	6.1	6.7	7.2
1	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
2	0.4	0.9	1.3	1.7	2.2	2.6	3.0	3.5	3.9	4.4	4.8	5.2	5.7
3	0.4	0.7	1.1	1.5	1.9	2.3	2.6	3.0	3.4	3.8	4.1	4.5	4.9
4	0.3	0.6	0.9	1.3	1.6	1.9	2.2	2.5	2.8	3.2	3.5	3.8	4.1
5	0.3	0.5	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.6	2.8	3.1	3.3
6	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.5
7	0.1	0.3	0.4	0.5	0.7	0.8	0.9	1.1	1.2	1.4	1.5	1.6	1.8
8	0.1	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0
9	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
	+	+	+	+	+	+	+	+	+	+	+	+	+
10	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6
11	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.4
28 0	0.2	0.3	0.5	0.7	0.8	1.0	1.2	1.3	1.5	1.7	1.8	2.0	2.2
1	0.2	0.5	0.7	0.9	1.1	1.4	1.6	1.8	2.0	2.3	2.5	2.7	2.9
2	0.3	0.6	0.9	1.2	1.4	1.7	2.0	2.3	2.6	2.9	3.1	3.4	3.7
3	0.4	0.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.5	3.8	4.2	4.5
4	0.4	0.8	1.2	1.6	2.0	2.4	2.8	3.3	3.7	4.1	4.5	4.9	5.3
5	0.5	0.9	1.4	1.9	2.3	2.8	3.3	3.7	4.2	4.7	5.1	5.6	6.1
6	0.5	1.1	1.6	2.1	2.6	3.2	3.7	4.2	4.7	5.3	5.8	6.3	6.9
7	0.6	1.2	1.8	2.4	2.9	3.5	4.1	4.7	5.3	5.9	6.5	7.0	7.6
8	0.7	1.3	1.9	2.6	3.2	3.9	4.5	5.2	5.8	6.5	7.1	7.8	8.4
9	0.7	1.4	2.1	2.8	3.5	4.2	5.0	5.7	6.4	7.1	7.8	8.5	9.2
10	0.8	1.5	2.3	3.1	3.8	4.6	5.4	6.1	6.9	7.7	8.4	9.2	10.0
11	0.8	1.7	2.5	3.3	4.1	5.0	5.8	6.6	7.4	8.3	9.1	9.9	10.8
29 0	0.9	1.8	2.7	3.5	4.4	5.3	6.2	7.1	8.0	8.9	9.8	10.7	11.6
1	1.0	1.9	2.8	3.8	4.7	5.7	6.6	7.6	8.5	9.5	10.4	11.4	12.3
2	1.0	2.0	3.0	4.0	5.0	6.0	7.1	8.1	9.1	10.1	11.1	12.1	13.1

[1]) Before using the table, a correction is required for the height of the barometer. This correction depends upon the attached thermometer, and is taken with the argument t − t′ from the small table at p. 564.

ARGUMENTS: CORRECTED BAROMETER[1]) AND MEAN REFRACTION CORRECTED FOR TEMPERATURE BY TAB. II.

MEAN REFRACTION + CORR. TAB. II.													
4′40″	5′0″	5′20″	5′40″	6′0″	6′20″	6′40″	7′0″	7′20″	7′40″	8′0″	8′20″	8′40″	9′0″
—	—	—	—	—	—	—	—	—	—	—	—	—	—
15″.4	16″.5	17″.5	18″.7	19″.8	20″.9	22″.0	23″.1	24″.3	25″.4	26″.5	27″.6	28″.7	29″.9
14.5	15.6	16.6	17.7	18.7	19.8	20.8	21.9	22.9	24.0	25.0	26.1	27.2	28.2
13.7	14.7	15.7	16.6	17.6	18.6	19.6	20.6	21.6	22.6	23.6	24.6	25.6	26.6
12.9	13.8	14.7	15.6	16.6	17.5	18.4	19.3	20.3	21.2	22.1	23.1	24.0	25.0
12.0	12.9	13.7	14.6	15.5	16.3	17.2	18.1	18.9	19.8	20.7	21.6	22.4	23.3
11.2	12.0	12.8	13.6	14.4	15.2	16.0	16.8	17.6	18.4	19.2	20.0	20.9	21.7
10.3	11.1	11.8	12.5	13.3	14.0	14.8	15.5	16.3	17.0	17.8	18.5	19.3	20.0
9.5	10.2	10.8	11.5	12.2	12.9	13.6	14.3	15.0	15.6	16.3	17.0	17.7	18.4
8.6	9.3	9.9	10.5	11.1	11.7	12.4	13.0	13.6	14.3	14.9	15.5	16.1	16.8
7.8	8.4	8.9	9.5	10.0	10.6	11.2	11.7	12.3	12.9	13.4	14.0	14.6	15.1
7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5
6.1	6.5	7.0	7.4	7.9	8.3	8.7	9.2	9.6	10.1	10.5	11.0	11.4	11.9
5.3	5.6	6.0	6.4	6.8	7.2	7.5	7.9	8.3	8.7	9.1	9.4	9.8	10.2
4.4	4.7	5.1	5.4	5.7	6.0	6.3	6.7	7.0	7.3	7.6	7.9	8.3	8.6
3.6	3.8	4.1	4.4	4.6	4.9	5.1	5.4	5.6	5.9	6.2	6.4	6.7	6.9
2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3
1.9	2.0	2.2	2.3	2.4	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7
1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.0
0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
+	+	+	+	+	+	+	+	+	+	+	+	+	+
0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2
1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9
2.3	2.5	2.7	2.8	3.0	3.2	3.3	3.5	3.7	3.8	4.0	4.2	4.4	4.5
3.2	3.4	3.6	3.8	4.1	4.3	4.5	4.8	5.0	5.2	5.5	5.7	5.9	6.2
4.0	4.3	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.9	7.2	7.5	7.8
4.9	5.2	5.6	5.9	6.3	6.6	7.0	7.3	7.7	8.0	8.4	8.7	9.1	9.4
5.7	6.1	6.5	6.9	7.3	7.8	8.2	8.6	9.0	9.4	9.8	10.2	10.7	11.1
6.5	7.0	7.5	7.9	8.4	8.9	9.4	9.8	10.3	10.8	11.3	11.7	12.2	12.7
7.4	7.9	8.4	9.0	9.5	10.0	10.6	11.1	11.6	12.2	12.7	13.3	13.8	14.3
8.2	8.8	9.4	10.0	10.6	11.2	11.8	12.4	12.9	13.6	14.2	14.8	15.4	16.0
9.1	9.7	10.4	11.0	11.7	12.3	13.0	13.7	14.3	15.0	15.6	16.3	17.0	17.6
9.9	10.6	11.3	12.0	12.8	13.5	14.2	14.9	15.6	16.4	17.1	17.8	18.5	19.3
10.8	11.5	12.3	13.1	13.9	14.6	15.4	16.2	17.0	17.8	18.5	19.3	20.1	20.9
11.6	12.4	13.3	14.1	14.9	15.8	16.6	17.5	18.3	19.1	20.0	20.8	21.7	22.5
12.4	13.3	14.2	15.1	16.0	16.9	17.8	18.7	19.6	20.5	21.5	22.4	23.3	24.2
13.3	14.2	15.2	16.2	17.1	18.1	19.0	20.0	21.0	21.9	22.9	23.9	24.9	25.8
14.1	15.1	16.2	17.2	18.2	19.2	20.2	21.3	22.3	23.3	24.4	25.4	26.4	27.5

Example:

App. Alt. 4° 18′ 31″.0
Barometer 28″ 5‴.3 P. M.
Therm. external t = −12°.5 R.
" attached t′ = − 4 .8
t − t′ = −7°.7 Corr. − 0‴.52
Barom. . . 28″ 5 .30
Corr. Barom. . . 28″ 4‴.78

Tab. I. App. Alt 4° 18′ 31″. . . . 11′ 1″.5
" II. M. refr. 11′ 1″.5 } Therm. − 12°.5 } . . . + 1 15 .6
" III. M. refr. + Tb. II. 12′ 17″.1. } Corr. Barom. 28″ 4‴.78 } + 0 17 .0
Refraction . . . . . . 12′ 34 .1

TABLE III. CORRECTION FOR HEIGHT OF BAROMETER.

BAROMETER.	Mean refraction + Corr. Tab. II.												
	9′ 0″	9′ 20″	9′ 40″	10′ 0″	10′ 20″	10′ 40″	11′ 0″	11′ 20″	11′ 40″	12′ 0″	12′ 20″	12′ 40″	13′ 0″
	—	—	—	—	—	—	—	—	—	—	—	—	—
26″ 3‴	29″.9	31″.0	32″.2	33″.3	34″.4	35″.5	36″.7	37″.8	39″.0	40″.1	41″.3	42″.4	43″.6
4	28.2	29.3	30.4	31.5	32.5	33.6	34.7	35.7	36.8	37.9	39.0	40.1	41.2
5	26.6	27.6	28.6	29.6	30.6	31.6	32.7	33.7	34.7	35.7	36.7	37.8	38.8
6	25.0	25.9	26.9	27.8	28.8	29.7	30.6	31.6	32.6	33.5	34.5	35.4	36.4
7	23.3	24.2	25.1	26.0	26.9	27.8	28.6	29.5	30.4	31.3	32.3	33.1	34.0
8	21.7	22.5	23.3	24.2	25.0	25.8	26.6	27.5	28.3	29.1	30.0	30.8	31.6
9	20.0	20.8	21.6	22.3	23.1	23.9	24.6	25.4	26.2	26.9	27.7	28.5	29.2
10	18.4	19.1	19.8	20.5	21.2	21.9	22.6	23.3	24.0	24.7	25.4	26.1	26.9
11	16.8	17.4	18.0	18.7	19.3	20.0	20.6	21.2	21.9	22.5	23.2	23.8	24.5
27 0	15.1	15.7	16.3	16.9	17.4	18.0	18.6	19.2	19.7	20.3	20.9	21.5	22.1
1	13.5	14.0	14.5	15.0	15.5	16.1	16.6	17.1	17.6	18.1	18.6	19.2	19.7
2	11.9	12.3	12.8	13.2	13.7	14.1	14.6	15.0	15.5	15.9	16.4	16.9	17.3
3	10.2	10.6	11.0	11.4	11.8	12.2	12.6	12.9	13.3	13.7	14.1	14.5	14.9
4	8.6	8.9	9.2	9.6	9.9	10.2	10.5	10.9	11.2	11.5	11.9	12.2	12.5
5	6.9	7.2	7.5	7.7	8.0	8.3	8.5	8.8	9.1	9.3	9.6	9.9	10.1
6	5.3	5 5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7
7	3.7	3.8	4.0	4.1	4.2	4.4	4.5	4.6	4.8	4.9	5.1	5.2	5.4
8	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0
9	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
	+	+	+	+	+	+	+	+	+	+	+	+	+
10	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
11	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.2
28 0	4.5	4.7	4.9	5.0	5.2	5.4	5.6	5.7	5.9	6.1	6.2	6.4	6.6
1	6.2	6.4	6.6	6.9	7.1	7.3	7.6	7.8	8.0	8.3	8.5	8.7	9.0
2	7.8	8.1	8.4	8.7	9.0	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.4
3	9.4	9.8	10.1	10.5	10.9	11.2	11.6	11.9	12.3	12.7	13.0	13.4	13.8
4	11.1	11.5	11.9	12.3	12.8	13.2	13.6	14.0	14.4	14.9	15.3	15.7	16.2
5	12.7	13.2	13.7	14.2	14.6	15.1	15.6	16.1	16.6	17.1	17.6	18.1	18.5
6	14.3	14.9	15.4	16.0	16.5	17.1	17.6	18.2	18.7	19.3	19.8	20.4	20.9
7	16.0	16.6	17.2	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3
8	17.6	18.3	19.0	19.6	20.3	21.0	21.6	22.3	23.0	23.7	24.4	25.0	25.7
9	19.3	20.0	20.7	21.5	22.2	22.9	23.7	24.4	25.1	25.9	26.6	27.4	28.1
10	20.9	21.7	22.5	23.3	24.1	24.9	25.7	26.5	27.3	28.1	28.9	29.7	30.5
11	22.5	23.4	24.2	25.1	26.0	26.8	27.7	28.5	29.4	30.3	31.1	32.0	32.9
29 0	24.2	25.1	26.0	26.9	27.8	28.8	29.7	30.6	31.6	32.5	33.4	34.3	35.3
1	25.8	26.8	27.8	28.8	29.7	30.7	31.7	32.7	33.7	34.7	35.7	36.7	37.7
2	27.5	28.5	29.5	30.6	31.6	32.7	33.7	34.8	35.8	36.9	37.9	39.0	40.1

*) Before using the table, a correction is required for the height of the barometer. This correction depends upon the attached thermometer, and is taken with the argument t − t′ from the small table at p. 564.

ARGUMENTS: CORRECTED BAROMETER¹) AND MEAN REFRACTION CORRECTED FOR TEMPERATURE BY TAB. II.

MEAN REFRACTION + CORR. TAB. II.													
13′ 20″	13′ 40″	14′ 0″	14′ 20″	14′ 40″	15′ 0″	15′ 20″	15′ 40″	16′ 0″	16′ 20″	16′ 40″	17′ 0″	17′ 20″	17′ 40″
—	—	—	—	—	—	—	—	—	—	—	—	—	—
44″.8	45″.9	47″.1	48″.2	49″.4	50″.5	51″.7	52″.9	54″.1	55″.3	56″.4	57″.6	58″.8	60″.0
42.3	43.4	44.5	45.6	46.7	47.8	48.9	50.0	51.1	52.2	53.4	54.5	55.6	56.7
39.8	40.9	41.9	42.9	44.0	45.0	46.1	47.1	48.2	49.2	50.3	51.3	52.4	53.4
37.4	38.4	39.3	40.3	41.3	42.3	43.2	44.2	45.2	46.2	47.2	48.2	49.1	50.1
34.9	35.8	36.7	37.6	38.6	39.5	40.4	41.3	42.4	43.2	44.1	45.0	45.9	46.9
32.5	33.3	34.2	35.0	35.9	36.7	37.6	38.4	39.3	40.1	41.0	41.8	42.7	43.6
30.0	30.8	31.6	32.4	33.1	33.9	34.7	35.5	36.3	37.1	37.9	38.7	39.5	40.3
27.6	28.3	29.0	29.7	30.4	31.2	31.9	32.6	33.3	34.1	34.8	35.5	36.3	37.0
25.1	25.8	26.4	27.1	27.7	28.4	29.0	29.7	30.4	31.0	31.7	32.4	33.0	33.7
22.7	23.3	23.8	24.4	25.0	25.6	26.2	26.8	27.4	28.0	28.6	29.2	29.8	30.4
20.2	20.7	21.3	21.8	22.3	22.8	23.4	23.9	24.4	25.0	25.5	26.0	26.6	27.1
17.8	18.2	18.7	19.2	19.6	20.1	20.5	21.0	21.5	21.9	22.4	22.9	23.4	23.8
15.3	15.7	16.1	16.5	16.9	17.3	17.7	18.1	18.5	18.9	19.3	19.7	20.1	20.5
12.9	13.2	13.5	13.9	14.2	14.5	14.9	15.2	15.5	15.9	16.2	16.6	16.9	17.2
10.4	10.7	10.9	11.2	11.5	11.8	12.0	12.3	12.6	12.9	13.1	13.4	13.7	14.0
7.9	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.5	10.7
5.5	5.6	5.8	5.9	6.1	6.2	6.4	6.5	6.6	6.8	6.9	7.1	7.2	7.4
3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.6	3.7	3.8	3.8	3.9	4.0	4.1
0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
+	+	+	+	+	+	+	+	+	+	+	+	+	+
1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5
4.3	4.4	4.5	4.6	4.8	4.9	5.0	5.1	5.2	5.3	5.5	5.6	5.7	5.8
6.8	6.9	7.1	7.3	7.5	7.7	7.8	8.0	8.2	8.4	8.5	8.7	8.9	9.1
9.2	9.5	9.7	9.9	10.2	10.4	10.7	10.9	11.2	11.4	11.6	11.9	12.1	12.4
11.7	12.0	12.3	12.6	12.9	13.2	13.5	13.8	14.1	14.4	14.7	15.1	15.4	15.7
14.1	14.5	14.9	15.2	15.6	16.0	16.3	16.7	17.1	17.5	17.8	18.2	18.6	19.0
16.6	17.0	17.5	17.9	18.3	18.8	19.2	19.6	20.1	20.5	20.9	21.4	21.8	22.3
19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.1	25.6
21.5	22.1	22.6	23.2	23.7	24.3	24.9	25.4	26.0	26.6	27.1	27.7	28.3	28.9
23.9	24.6	25.2	25.8	26.4	27.1	27.7	28.3	29.0	29.6	30.2	30.9	31.5	32.2
26.4	27.1	27.8	28.5	29.2	29.8	30.5	31.2	31.9	32.6	33.3	34.0	34.7	35.4
28.8	29.6	30.4	31.1	31.9	32.6	33.4	34.1	34.9	35.7	36.4	37.2	38.0	38.7
31.3	32.1	32.9	33.8	34.6	35.4	36.2	37.0	37.9	38.7	39.5	40.4	41.2	42.0
33.8	34.6	35.5	36.4	37.3	38.2	39.1	40.0	40.8	41.7	42.6	43.5	44.4	45.3
36.2	37.2	38.1	39.0	40.0	40.9	41.9	42.9	43.8	44.8	45.7	46.7	47.7	48.6
38.7	39.7	40.7	41.7	42.7	43.7	44.7	45.8	46.8	47.8	48.8	49.9	50.9	51.9
41.1	42.2	43.3	44.3	45.4	46.5	47.6	48.7	49.7	50.8	51.9	53.0	54.1	55.2

Example:

App. Alt. 11° 18′ 0″
Barom. 28″.31 Engl.
Therm. external 85° Fh.
" attached 70
Reduction (see p. 564.)
Barom. 28.25 . . 26″ 6‴
.06 .68
28.31 . . 26″ 6.68
Therm. 85° = 83.75 + 1.25 = 23° + 0.44
+ 09
+ 02
23°.55 = 23.6 = t
70° = 68° + 2° . . 16° + 0.89
= 16°.89 = 16.9 = t′
t − t′ = + 6°.7 Corr. + 0‴.46
Corr. Bar. 26″ 7‴.14

Tab. I. App. Alt. 11° 18′ 0″ . . 4′ 41″.0
" II. M. refr. 4′ 41″ } Therm. + 23°.6 } . . . − 20 .5
" III. M. refr. + Tab. II. 4′ 21″ } Corr. Bar. 26″ 7‴.14 } − 11 .0
Refraction . . . . 4′ 9″.5

CONSTANTS.

		log.
Base of Naperian logarithms	$\varepsilon = 2.7182818$	0.4342945
Log. ε = Modulus of common logarithms	$M = 0.4342945$	9.6377843 − 10
Radius reduced to seconds	206264.8	5.3144251
„ „ „ minutes	3437.7468	3.5362739
„ „ „ degrees	57.29578	1.7581226
360 degrees expressed in seconds	1296000	6.1126050
„ „ „ „ minutes	21600	4.3344538
„ „ „ „ degrees	360	2.5563025
Diameter 1, circumference	$\pi = 3.14159265$	0.4971499
	$\frac{1}{\pi} = 0.3183099$	9.5028501 − 10
	$\pi^2 = 9.8696044$	0.9942997
	$\sqrt{\pi} = 1.7724539$	0.2485749
	$\sqrt[3]{\frac{\pi}{6}}$	9.9063329 − 10

Dimensions of the Earth according to Bessel:

Semi-axis major	a = 3272077.14 toises	6.5148235
Semi-axis minor	b = 3261139.33 „	6.5133694
a in English feet	= 20923597	7.3206363
b „ „ „	= 20853654	7.3191822
a in English miles	= 3962.8025	3.5980024
b „ „ „	= 3949.5557	3.5965482
Ellipticity of meridian	$= \frac{a-b}{a} = \frac{1}{299.1528}$	7.5241069 − 10
Excentricity of meridian	$\sqrt{\frac{a^2-b^2}{a^2}} = 0.08169683 = \frac{1}{12.24038}$	8.9122052 − 10

Horizontal equatoreal parallax of the Sun according to Encke.	8″.57116	0.9330396
Distance of the Earth from the Sun	= 95364768 Engl. mls.	7.9793886
Year accord^g. to Hansen and Olufsen — sidereal	365.2563582 mean days.	2.5625978
Year accord^g. to Hansen and Olufsen — tropical	365.2422008 „ „	2.5625809

Precession according to Bessel = 50″.21129 + 0.0002442926t (epoch 1750)
„ „ „ Struve = 50.2298 + 0.000226t „ „

Equatoreal precession (Bessel) m = 46″.02824 + 0″.000308645t n = 20″.06442 − 0″.0000970204t
Equatoreal precession (Struve) m = 46 .0481 + 0 .000284t n = 20 .0650 − 0 .000086t
Diurnal precession = 0″.13759 (1856)
Aberration according to Delambre = 20″.255
„ „ „ Struve = 20 .4451
Nutation „ „ v. Lindenau = 8 .97707
„ „ „ Peters = 9 .2231
Obliquity of the ecliptic acc^g. to Struve (1750) 23°28′17″.44 and Peters (1800) 23 27 54 .22 − 0.4645t

Light is propagated from the Sun to the Earth	acc^g. to Delambre in 493″.198	2.6930213
	„ „ Struve „ 497 .827	[illegible].6970785
Velocity of light	acc^g. to Delambre 193360.0 Eng. ml.	5.2863666
	„ „ Struve 191562.0 „ „	5.2823094

Masses of the Planets, the Suns mass being = 1.

Mercury	$= \frac{1}{4865751}$	(Encke)	Jupiter	$\frac{1}{1047.879}$	(Bessel)
Venus	$= \frac{1}{390000}$	(Le Verrier)	Saturn	$\frac{1}{3501.6}$	(Bessel)
Earth	$= \frac{1}{354936}$	(Le Verrier)	Uranus	$\frac{1}{24905}$	(Lamont)
Mars	$= \frac{1}{2680637}$	(Burckhardt)	Neptune	$\frac{1}{18780}$	(Peirce)

Moon $= \frac{1}{79.667}$ of the mass of the Earth (Hansen)

Attraction of the Sun according to Gauss	k in parts of the radius	0.0172021	8.2355814 − 10
	k in seconds of arc	3548.18761	3.5500066

AUXILIARY TABLE.

S	Arc.	log. sin.
4.685 5749	1′ 39″	6.681
5748	3 18	6.982
5747	5 13	7.181
5746	6 36	7.283
5745	7 44	7.352
4.685 5744	8 44	7.405
5743	9 37	7.447
5742	10 26	7.482
5741	11 11	7.512
5740	11 54	7.539
4.685 5739	12 34	7.563
5738	13 12	7.584
5737	13 48	7.604
5736	14 23	7.622
5735	14 56	7.638
4.685 5734	15 28	7.653
5733	16 0	7.668
5732	16 30	7.681
5731	16 59	7.694
5730	17 28	7.706
4.685 5729	17 56	7.717
5728	18 22	7.728
5727	18 48	7.738
5726	19 14	7.748
5725	19 39	7.757
4.685 5724	20 4	7.766
5723	20 28	7.775
5722	20 52	7.783
5721	21 15	7.791
5720	21 38	7.799
4.685 5719	22 1	7.806
5718	22 23	7.814
5717	22 44	7.820
5716	23 6	7.827
5715	23 27	7.834
4.685 5714	23 47	7.840
5713	24 8	7.846
5712	24 28	7.852
5711	24 48	7.858
5710	25 8	7.864
4.685 5709	25 27	7.869
5708	25 46	7.875
5707	26 5	7.880
5706	26 24	7.885
5705	26 42	7.890
4.685 5704	27 0	7.895
5703	27 18	7.900
5702	27 36	7.905
5701	27 54	7.909
5700	28 11	7.914
4.685 5699	28 29	7.918
5698	28 46	7.923
5697	29 3	7.927
5696	29 19	7.931
5695	29 36	7.935
4.685 5694	29 53	7.939
5693	30 9	7.943
5692	30 25	7.947
5691	30 41	7.951
5690	30 57	7.954
4.685 5680	33 29	7.988
5670	35 50	8.018

T	Arc.	log. tang.
4.685 5749	2′ 36″	6.879
5750	3 18	6.982
5751	4 22	7.104
5752	5 13	7.181
5753	5 57	7.238
5754	6 36	7.283
4.685 5755	7 11	7.320
5756	7 44	7.352
5757	8 15	7.380
5758	8 44	7.405
5759	9 11	7.427
4.685 5760	9 37	7.447
5761	10 2	7.465
5762	10 26	7.482
5763	10 49	7.498
5764	11 11	7.512
4.685 5765	11 33	7.526
5766	11 54	7.539
5767	12 14	7.551
5768	12 34	7.563
5769	12 53	7.574
4.685 5770	13 12	7.584
5771	13 30	7.594
5772	13 48	7.604
5773	14 6	7.613
5774	14 23	7 622
4.685 5775	14 40	7.630
5776	14 56	7.638
5777	15 13	7.646
5778	15 29	7.654
5779	15 44	7.661
4.685 5780	16 0	7.668
5781	16 15	7.675
5782	16 30	7.681
5783	16 44	7.687
5784	16 59	7.694
4.685 5785	17 13	7.700
5786	17 27	7.706
5787	17 41	7.711
5788	17 55	7.717
5789	18 9	7.723
4.685 5790	18 22	7.728
5791	18 35	7.733
5792	18 49	7.738
5793	19 2	7.743
5794	19 14	7.748
4.685 5795	19 27	7.753
5796	19 39	7.757
5797	19 52	7.762
5798	20 4	7.766
5799	20 16	7.771
4.685 5800	20 28	7.775
5810	22 23	7.814
5820	24 8	7.846
5830	25 46	7.875
5840	27 19	7.900
4.685 5850	28 46	7.923
5860	30 9	7.943
5870	31 28	7.962
5880	32 46	7.979
5890	33 58	7.995
5900	35 9	8.010

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